

Document #706 Comment #1 Commentor: Fields, Sarah

It is our position that the Moab Mill's tailings pile be moved by the existing railroad to an Off-Site Disposal Alternative in the Mancos shale deposits north of Moab. We believe that the Crescent Junction Alternative would be more protective of the environment and the health and safety of the public over both the short and long term than the Klondike Flats Alternative.

Response:

Based on consideration of all the technical data, uncertainties, and comments on the draft EIS, DOE has identified the Crescent Junction site using rail transportation as its preferred surface remediation alternative.

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Document #706 Comment #2 Commentor: Fields, Sarah

The Cap-In-Place Alternative is unacceptable because the Department of Energy (DOE) would not be able to provide reasonable assurance that the site would be reclaimed in such a manner that it would be protective of the environment and the health and safety of the public over the even the minimal reclamation standard time frame (200 to 1000 years) let alone over the thousands of years that the tailings would remain hazardous and the DOE would have total responsibility for the integrity of the site.

Response:

Though additional studies would be required if the on-site disposal alternative were selected, DOE believes, and the EIS indicates, that this alternative could be implemented to comply with the requirements of UMTRCA and 40 CFR 192 without unacceptable adverse impacts on public health and safety and the environment for the minimum regulatory period of 200 to 1,000 years. Section 2.6.3 identifies the uncertainties associated with the disposal alternatives, and Section 2.6.4 identifies responsible opposing views to those of DOE on several technical issues.

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Document #706 Comment #3 Commentor: Fields, Sarah

The Moab site is an inherently unstable site, with an unknown history and an unknown future. The more the site is studied, particularly by an independent person or entity, the more questions arise related to the long-term suitability of the site. The subsurface of the site has never been adequately characterized by a full and independent study. The DOE needs to conduct a study that is solely dedicated to determining the past history of Colorado River meander under the site, the factors related to subsidence, the geological structures under the site, and the relationship of these features of the site to the Colorado River and movement of contaminants. Without such studies, the DOE has no basis for any assurances regarding the stability and suitability of the Moab site. If the DOE is unable or unwilling to assign such a study to a qualified outside entity, such as the U.S. Geological Survey (USGS), then it has no scientific basis for leaving the tailings in place.

Response:

DOE believes the results of the DOE study on river migration and the subsurface investigations conducted as part of the SOWP (Section 5) are adequate for identifying a preferred alternative in this EIS and will be adequate to support DOE's final decision-making. DOE has incorporated findings from other qualified outside entities such as the USGS in the design of the protective barrier, which would be a key river migration mitigation measure if the on-site alternative were selected. DOE acknowledges the uncertainties associated with geologic processes and will continue to consider these uncertainties in the decision-making process. Uncertainties are addressed in Tables S-1 and 2-33 of the EIS.

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Document #706 Comment #4 Commentor: Fields, Sarah

The current uncertainties, which are accumulating, call into question past DOE and Nuclear Regulatory Commission (NRC) assumptions regarding site suitability. I would refer the DOE to the recent studies by Dr. John Dohrenwend regarding Colorado River meander, the studies by Dr. Kip Solomon, and the recent study by the USGS, Scientific Investigations Report 2005 – 5022 Initial-Phase Investigation of Multi-Dimensional Streamflow Simulations in the Colorado River, Moab Valley, Grand County, Utah, February 2004, U.S. Department of the Interior, USGS.

Response:

As a result of input developed in the public comment process and consultations with the 12 cooperating agencies, DOE has identified three general topics on which there exist responsible opposing views to the Department's position regarding the remediation alternatives for the Moab site: river migration, contaminated ground water flow under the river to the Matheson Wetlands Preserve, and the appropriate compliance standard for aquatic species in the river. Section 2.6.4. summarizes the responsible opposing views on these topics.

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Document #706 Comment #5 Commentor: Fields, Sarah

The White Mesa Alternative is also an unsuitable option. It is the most costly, the most technically complex, would have unacceptable impacts on low-income and Native American communities, would have unacceptable adverse impacts on cultural resources of the Native American communities that would be impossible to mitigate, would destroy at least a dozen significant archeological sites at the International Uranium (USA) Corporation (IUSA) Uranium Mill, and is too close to a human population. There is the potential for contamination of a major water resource aquifer underneath the site. Such contamination would destroy the aquifer as a significant water resource for the surrounding community.

Response:

Section 2.7.3 identifies the White Mesa Mill alternative as the most expensive of the alternatives considered and likely the most technically complex. Impacts on cultural resources and traditional cultural properties associated with construction activities at the White Mesa Mill site are identified in Section 4.4.9. Section 3.4.5 of the EIS does indicate that the uppermost aquifer below the site is a significant water resource that discharges at Ruin Spring; however, the estimated travel times to ground water are several thousands of years (Section 4.4.3.1). Should contamination reach the water table, adverse impacts to the ground water could occur.

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Document #706 Comment #6 Commentor: Fields, Sarah

The DOE failed to prepare the DEIS “in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et seq.), the Council on Environmental Quality (CEQ) regulations that implement the procedural provisions of NEPA (40 CFR Parts 1500-1508), and the DOE procedures implementing NEPA (10 CFR Part 1021)” as claimed by the DOE. See 67 Fed. Reg. 70256 (December 3, 2004).

The CEQ NEPA regulations set forth many agency requirements for a DEIS. As will shown below, in numerous instances, the DEIS failed to meet the directive to “provide full and fair discussion of significant environmental impacts.” See 40 C.F.R. § 1502.1 (Purpose). DOE’s NEPA implementing regulations state that, “it is DOE’s policy to follow the letter and spirit of NEPA” and “comply fully with the CEQ Regulations.” The DOE also adopted the DEQ regulations into their own regulations. See 10 C.F.R. § 1021.101 (Policy) and § 1021.103 (Adoption of CEQ NEPA regulations).

Response:

DOE believes that the EIS meets all CEQ and DOE NEPA requirements.

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Document #706 Comment #7 Commentor: Fields, Sarah

The DEIS does not meet the requirements of 40 C.F.R. § 1502.24, (Methodology and scientific accuracy), which states:

Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements. They shall identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement. An agency may place discussion of methodology in an appendix.

Response:

The analyses were prepared by knowledgeable and experienced scientists and engineers. Wherever applicable, reference citations have been provided, and the references have been placed in the public reading rooms.

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Document #706 Comment #8 Commentor: Fields, Sarah

The DIES failed to properly cite references. References are very general or missing entirely. There is no cites to specific pages, paragraphs, sections, figures, tables, maps, etc. Often there is no reference at all for assertions, data, and conclusions contained in the DEIS. Contrary to CEQ regulations, there are no “explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement.” The DEIS often references the 2003 Site Observational Work Plan (SOWP), never providing a page or volume number. These references to this massive, complex, 3-volume document do not suffice as “explicit references.”

Response:

See response to comment #7. The SOWP has a thorough table of contents that includes bookmarks and hyperlinks to facilitate the interested reader’s access to any specific area of interest.

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Document #706 Comment #9 Commentor: Fields, Sarah

The DEIS, Section 1.2.1, states that Atlas Corporation's "decommissioning of the mill began in 1988, and an interim cover was placed on the tailings pile between 1989 and 1995." This statement regarding the presence of an interim cover on the impoundment is reiterated elsewhere in the DEIS. The statement is not followed by any other discussion of the fate of that "interim cover." Thus, the reader would get the mistaken impression that there was, indeed, an "interim cover" on the impoundment.

The placement on an "interim cover" on the impoundment was required by a condition of Atlas Corporation's license (License Condition 55, License No. SUA-917, Docket No. 40-3453), which established site reclamation milestones for Atlas's Moab Uranium Mill. That requirement was based on a Memorandum of Understanding between the Environmental Protection Agency (EPA), the Nuclear Regulatory Commission (NRC), and affected NRC Agreement States. See 56 Fed. Reg. 55432-55435, October 25, 1991.

Response:

The interim cover was installed in order to provide for short-term protection of the public and the environment. Regardless of the disposal alternative chosen, the interim cover in essence is a barrier left in place while measures for final disposal are decided. Once the decision for disposal is made, engineered plans for disposal would include the interim cover as part of the material to be disposed of. Until engineered disposal plans are developed, accepted, and approved, and operations for final disposition of the tailings begin, the interim cover will remain in place.

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Document #706 Comment #10 Commentor: Fields, Sarah

The interim cover placed on the impoundment by Atlas did not prevent contaminants from rising to the surface of the impoundment. According to Atlas:

The capillary rise in unconsolidated silts that are as fine as Atlas' slimes can be as much as seven feet, of more - Groundwater Hydrology, by David Keith Todd, table 2.4 on page 35.

Evaporation of the upward-seeping [tailings] solutions from near-surface³ saturated slimes has continued until three to six inch thick salt crusts formed over the slimes by the summer of 1995, thus contributing to the progressive stabilization of the central slimes tailings area. [no footnote included]

See Transmittal of Atlas Corporation's As-Built Construction Report for the Completion of the Interim Cover, from Richard Blubaugh, Atlas Corporation, to Dan Gillen, NRC (October 16, 1996).

Subsequently, in 1999 PricewaterhouseCoopers (PWC) took over as trustee and licensee for the site. Contractors for PWC reworked the surface of the tailings impoundment, and contaminated materials from the site were placed on the impoundment. According to PWC's proposed dewatering program:

Document #706 Comment #10 - continued

The existing surface of the tailings, within the limits of the [“exposed”] saturated slimes would be minimally regraded and a thin working layer would be placed as required for equipment access. The working layer is anticipated to be approximately 3.5 feet thick, and would be constructed primarily with coarse tailings (sand) from the surface of the [tailings] facility. Areas of the saturated slimes that are to be excavated to form the final subgrade surface are excluded from this step. [Page 1.]

Recontouring and grading of the remainder of the subgrade with [contaminated] fill material (e.g., up to the interim cap elevation, prior to the clay final cap) will proceed inward from the outer edges of the tailings surface. Material needed for this fill will be moved from the mill area of the Site where early characterization indicates presence of the highest levels of windblown tailings and other contaminants. . . . [Page 2.]

See letter from Keith Eastin, PWC, to Philip Ting, NRC, regarding “Docket No. 40-3453, License No. SUA-917, Atlas Moab Uranium Mill tailings Facility - Dewatering Design” (August 25, 2000).

On September 12, 2000, NRC Staff approved PWC’s dewatering plan. The September 12 stated that the “design details of the dewatering plan were submitted by letter dated August 1, 2000, and supplemented by submittals dated August 3, 2000, August 4, 2000, and August 25, 2000. See letter from Philip Ting, NRC, to Keith Eastin, PWC, (September 12, 2000).

Atlas’s “slimes” became PWC’s “exposed” slimes. Atlas’s “3 to 6 inch salt crust was proposed to be reconstituted as PWC’s “soil cover [advanced] across remaining [exposed] slimes area.”

On November 14, 2000, an NRC geotechnical engineer observed earthwork operations being conducted on the Moab Reclamation Trust tailings pile. The NRC viewed daily construction records and work plans for repairing the tailings pile. The construction operations included the regrading of outslopes, excavation of coarse tailings, and excavation/hauling of slime tailings. According to the daily summaries, construction operations began on September 14, 2000, and included excavation and hauling slimes, and excavation of coarse tailings. With permission from the NRC, the licensee began regrading the outslopes of the tailings pile on October 23, 2000. Most of a the construction activity was routine, with the following exceptions:

On October 9th, a mud wave was generated as tailings were spread over the lowest area in the center of the site.” [Pages 3–4.]

The contractor indicated that about 70 percent (estimated 17, 000) of the [dewatering] wicks had been installed as of November 14, 2000. . . . A small amount of saturated tailings slime was brought to the surface at each wick installation. [Page 4.]

See letter from D. Blair Spitzberg, Chief, Fuel Cycle and Decommissioning Branch, Region IV, NRC, Arlington, Texas, to Jim Langley, Manager, Financial Advisory Services, PWC, regarding NRC Inspection Report 40-3453/00-01 (and enclosures thereto) (February 6, 2001), Executive Summary.

During and after the PWC reworking and placement of contaminated materials on the impoundment there began a period of extensive off-site wind-blown contamination from the site.

Document #706 Comment #10 - continued

PWC eventually just stopped work and did not provide the NRC with the as-built drawings of the work that they had completed on the impoundment.

The DOE should provide the public with a complete picture of all the work done related to the disturbance of the top and slopes of the original interim cover.

The DEIS must provide complete and accurate information on the status of the cover at the site and not give the public and decision-makers the distinctly false impression that a fully operable “interim cover” is in place.

Response:

Sections 2.1 and 2.2 clearly indicate that a newly designed and NRC-approved cover would be required for either an on-site or off-site disposal cell. Other than under the No Action alternative, no credit has been taken for the interim cover in modeling long-term performance. As a result, DOE sees no need to provide a detailed history of the actions of the parties with previous responsibilities for the site.

All of DOE’s interim actions are allowed under CEQ’s NEPA regulations to protect human health and the environment because the actions do not prejudice the outcome of DOE’s remediation decision. Each interim action has been independently reviewed in accordance with its own NEPA evaluation by the appropriate federal and state agencies and has been presented to the public through meetings and web page listings. This information is fully disclosed in the EIS. All of DOE’s interim actions are designed to reduce human health and environmental risks.

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Document #706 Comment #11 Commentor: Fields, Sarah

Disposal Cell Failure from Natural Phenomena, Section 4.1.17 of the DEIS.

The apparent purpose of this section of the DEIS is to make it appear that the impacts from a disposal failure would be minimal and acceptable. This section trivializes, distorts, minimizes, or completely ignores the impacts on the environment of a catastrophic disposal cell failure.

NEPA demands that there be a full and fair discussion, or assessment, of the significant environmental impacts of a disposal cell failure due to impacts of natural phenomena from geological forces or from the Colorado River. As will be shown below, this section of the DEIS fails to provide such a discussion. See 40 C.F.R. § 1501.1, “Purpose.”

Response:

Even though DOE believes that there are no plausible mechanisms for catastrophic failure of an on-site disposal cell, DOE analyzed the consequences of such a failure. The analyses in Section 4.1.17 serve as a screening tool to demonstrate that there could be significant differences among the on-site and off-site alternatives to support decision-making. The commentor may disagree with the results of these analyses, but these analyses do not trivialize, distort, minimize, or ignore the potential impacts on the environment.

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Document #706 Comment #12 Commentor: Fields, Sarah

DEIS (page 4–50): Although the probability of a significant release would be very small over the design life of the on-site disposal cell, this type of failure was assumed to occur in order to evaluate the potential consequences (risks).

Comment: The DOE errs in only considering the potential of severe flooding “over the design of the on-site disposal cell” and the impacts of a catastrophic during that time frame. There is no time limit on the consideration of reasonably expected environmental impacts that must be considered in an NEPA document.

Response:

No limit is placed on the time of occurrence of either flooding, which DOE assumes would occur periodically forever, or catastrophic failure. In fact, the analyses are conservative in this regard in not reducing the concentrations of some contaminants that would degrade over time. The EIS assesses all potential sources of impacts to human health and the environment for the appropriate durations. For example, it is acknowledged that basin subsidence will result in an on-site pile coming into contact with ground water in 7,000 to 10,000 years, at which time additional impacts would be possible. Conversely, worker exposures are only calculated for the few years’ duration of their exposure.

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Document #706 Comment #13 Commentor: Fields, Sarah

The DIES totally ignores the fact that the DOE will have responsibility for the impoundment, essentially, forever. The DEIS fails to address the probability for a “significant release” during the length of time that the federal government will have responsibility for the site and responsibility for the clean-up of any contamination or tailings released from the site.

It is arbitrary for the DOE to assess the potential impact to the impoundment for only 200-1000 years. There is no legal basis for the DOE putting a time limit on consideration of potential environmental impacts that would result from leaving the Moab Mill tailings in place.

It was the intent of Congress that “uranium mill tailings disposal sites should in all cases be controlled and regulated by States and the Commission, to the maximum extent allowed by the state of the art, to insure that the public and the environment will be protected from the hazards of the tailings for as long as they remain a hazard.” House Report No. 95-1480—Part I, p. 17-18.

Response:

DOE acknowledges its perpetual responsibility and has included the cost of such activities in Section 2.7.3 of the EIS. The 200 to 1,000 years is not arbitrary; it is a regulatory requirement in 40 CFR 192. The EIS evaluates the ability of all disposal alternatives to meet the objectives of the cited House report.

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Document #706 Comment #14 Commentor: Fields, Sarah

DEIS (page 4–50): “Several processes could affect the integrity of the disposal cell at the Moab site:

- River Migration--The Colorado River could migrate into the disposal cell over an extended period of time. Because this river migration would be assumed to occur over many years, a failure of long-term management of the pile would also have to occur for tailings releases to be significant.”

Comment: The DEIS does not explain what the basis is for the assumption that river migration would occur over a period of years. In a flood event, the river could migrate rapidly, creating a new channel. The DEIS fails to consider the possibility of a catastrophic flood after a period of channel migration towards the impoundment.

Prudence demands that the DOE not rely on “long-term management of the pile” for assurances that the impoundment would not be compromised by natural forces. As stated in House Report accompanying the passage of the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA), “The committee believes that uranium mill tailings should be treated by the custodian in accordance with the substantial hazard they will present until long after our existing institutions can be expected to last in their present forms.” House Report No. 95-1480—Part I, p. 17.

Response:

DOE’s analyses support a conclusion that the river will not migrate toward the pile during the 200- to 1,000-year regulatory time frame. Section 4.1.17 and Section 2.6 of the EIS discuss the potential for the Colorado River to migrate and damage the tailings pile if the tailings were not relocated. There are responsible opposing views regarding river migration. The EIS has been expanded to present and discuss these opposing views (Section 2.6.4). If on-site disposal were selected, an on-site disposal cell would include side slopes armored with riprap (Section 2.1.3.1) of sufficient size to resist erosion from floodwaters. The design would also include a barrier wall (Section 2.1.4) between the river and the capped pile to mitigate against river encroachment. These engineered designs would further reduce the highly unlikely chance of a catastrophic failure of the disposal cell should river migration begin to occur unexpectedly.

The descriptions of the conceptual cell cover and barrier wall design have been expanded in the EIS (Sections 2.1.1.3 and 2.1.1.4) to state that riprap materials would be sized to withstand the maximum river forces recently identified by USGS and that the barrier wall would be of sufficient length to mitigate against river encroachment. The final design specifications for the wall (including, for example, its dimensions) would be developed in a remedial action plan if the on-site alternative were selected. The estimated cost range for remediation (shown in Table 2–33, item #9) would accommodate materials consistent with the recent USGS report.

Document #706 Comment #14 - response continued

In the EIS, DOE describes the potential environmental impacts of both a catastrophic and a long-term disposal cell failure under the on-site disposal alternative (see Section 4.1.17). Although there are no plausible conditions under which a catastrophic disposal cell failure could occur under this alternative, DOE assumed that such a failure would occur in order to evaluate the potential consequences.

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Document #706 Comment #15 Commentor: Fields, Sarah

DEIS (pages 4-51 to 4-56) analyses the environmental impacts of catastrophic event: "Risks to humans would be based on some type of activity that would bring people in contact with contamination. In this case, the contamination currently in the tailings pile was assumed to be dispersed downstream during an event such as a flood, and it was assumed that people would come in contact with this contamination in the water or sediments."

Comment: The impact scenarios that the DEIS discusses are totally out of touch with the reality of the use of the river as a major national recreational resource, the presence of public lands, and the desert environment. The DIES postulates a home built near the Colorado River. There are few places within the river basin below Moab where such a scenario could possibly take place.

Response:

In accordance with NEPA, DOE analyzed the potential impacts of a catastrophic event, even though DOE believes its occurrence is highly unlikely.

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Document #706 Comment #16 Commentor: Fields, Sarah

The DEIS fails to mention or address the fact that the Colorado River shortly downstream from Moab flows, without a break, through 1) Canyonlands National Park, 2) Glen Canyon National Recreation Area, 3) Grand Staircase-Escalante National Monument, and 4) the Navajo Indian Nation. The confluence of the Colorado and Green Rivers occurs within Canyonlands National Park. Most of the other lands next to the river are also in the public domain. The DEIS arbitrarily excludes consideration of impacts to the Colorado River below Glen Canyon Dam down into Mexico.

The DEIS fails to include a land use and land ownership map from Moab to the Gulf of California.

Response:

DOE did not arbitrarily exclude consideration of impacts below Glen Canyon Dam. Several sections of the EIS discuss potential impacts to the Colorado River, including the potential for catastrophic failure (see Section 4.1.17). However, the potential for a failure impacting human health and the environment is considered minimal below Glen Canyon Dam; therefore, DOE does not address land ownership from Moab to the Gulf of California. This is supported by technical and scientific data presented in the EIS.

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Document #706 Comment #17 Commentor: Fields, Sarah

The risks discussed have absolutely no relationship to the actual use by humans of the Colorado River between Moab and the Glen Canyon Dam at Page, Arizona, and beyond. The DEIS ignores the fact that the Colorado River is the 5th largest river in the United States and is the major source of drinking water, agriculture water, and recreation in the Southwest. The river provides numerous economic, social, aesthetic, and scientific resources for millions of people. Why is this not mentioned or analyzed in the DEIS?

The DEIS fails to take into consideration the recreational boating, both personal and commercial, on the Colorado. It does not identify the amount of that use, the number of trips that recreational guides take. There is no assessment of the impacts on the river-boating community by contamination from either gradual or single event scenarios, or a combination of both.

Response:

The purpose of this evaluation was to evaluate potential risks if a catastrophic failure were to occur, even though no plausible mechanism for such a failure exists. NEPA requires that the characterization of the existing environment should be commensurate with the magnitude of the potential impacts. Because the effects of site discharges, even under the No Action alternative, cannot be detected above background levels a few hundred meters downstream, there is no potential to directly affect the users identified in the comment. Therefore, the suggested characterization was considered unnecessary.

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Document #706 Comment #18 Commentor: Fields, Sarah

DEIS (page 4–51): “Other activities such as camping in a contaminated area would yield lower risks because exposure to contamination would occur for a limited number of days per year.”

Comment: There is no basis for this statement. DEIS shows that there is a complete lack of data regarding the number of days any commercial recreational worker would camp on the river. The DEIS does not contain any data regarding the use of the river as a source of drinking and wash water by the river boating community, including commercial guides. There is no assessment of the amount of time boaters and guides waded in the river, are splashed by river water, are dunked by boating accidents, and would otherwise be exposed to contaminated water, contaminated sediments, and contaminated particulates.

Response:

The camping scenario assumed that camping occurs on the Moab site, where the highest contaminant concentrations would occur. The camping scenario reflects the risks associated with contaminated soils and surface water that would exist immediately adjacent to the tailings pile on the bank of the Colorado River shortly after cell failure. Two days of exposure were used because it is unlikely that any one camper would repeatedly camp at a location adjacent to the tailings pile after a failure when there are numerous, more favorable camping areas elsewhere. More favorable camping areas located downstream (including those sites that are closer to the Moab site) would have lower contaminant concentrations, thus mitigating the impact of increased usage.

DOE agrees that there is, and would likely continue to be, substantial recreational use downstream of the Moab site. However, when estimating risk, the additional use does not compensate for the significant decrease in contaminant concentrations in these downstream areas. When estimating risk, an increase in the contaminant concentration (or exposure point concentration) is directly proportional to the exposure duration. For example, the estimated dissolved uranium concentration listed in Table 4–17 for 80 percent release at the Moab site is approximately 333 times Lake Powell concentrations. For exposure pathways involving water ingestion, the exposure duration would need to be 333 times greater (666 days per year [2 days’ duration for camping times 333], which is greater than the 365 days per year that are available) at Lake Powell compared to the Moab site to account for this difference in exposure point concentrations. Concentrations would begin to drop immediately downstream of the site, so this same type of effect (to a lesser degree) would also occur for camping sites closer to the Moab site. Risks from gamma exposure from these materials compared to the risks estimated in Section 4.1.17 would be minimal, mostly because the materials would mix with, or receptors would be shielded by, water and uncontaminated sediments.

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Document #706 Comment #19 Commentor: Fields, Sarah

DEIS (page 4–51): “First, it was assumed that someone would build a house on contaminated sediments released from the tailings pile at a location downstream of the pile (residential scenario). This scenario assumes a home would be built in a contaminated area and the contaminated water (in this case, contaminated surface water) would be used as the primary drinking water source for many years (in reality, the contaminant concentrations in water would only last on the order of days...”

Comment: There is no substantiation of the assumption that “the contaminant concentrations in water would only last on the order of days.” The DEIS fails to assess a circumstance where there is a continual release of contaminants into the river from the tailings, contaminated groundwater, contaminated sediments, and contaminated soils outside of the impoundment.

Response:

The purpose of this evaluation was to examine potential impacts from a large volume of tailings being washed into the Colorado River. DOE agrees that concentrations would remain somewhat elevated; however, they would continue to decrease as clean, upstream water entered this part of the watershed. Any further substantiation is not practical considering the huge uncertainties associated with this hypothetical scenario.

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Document #706 Comment #20 Commentor: Fields, Sarah

DEIS (page 4–51): “... therefore, the exposures to contaminated water under a residential scenario are unrealistically high but provide an upper bound to the potential risks). The most significant risks would occur from ingestion of contaminated drinking water and exposure to the radon in air originating from radium-226.”

Comment: There is no mention of ingestion of contamination from dust via ingestion or breathing. This significant exposure pathway is not considered here. The DEIS fails to acknowledge that contaminated areas would dry out, especially in the dry climate, and contaminated materials would then be dispersed by wind, of which there is plenty.

The DEIS fails to provide an accurate and realistic scenario regarding the potential impact to humans from contamination in and near the river corridor.

Response:

In analyzing exposure, dust is not considered to be ingested, but rather inhaled. The inhalation route is typically not as significant as ingestion of water and exposure to radon when examining radiological contaminants. Considering the very large uncertainties associated with this type of screening-level evaluation, it is appropriate to eliminate the less important routes of exposure. As noted in Section 4.1.17, even without consideration of the inhalation route, risks under the residential scenario would be greater than protective levels.

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Document #706 Comment #21 Commentor: Fields, Sarah

DEIS (page 4–51) “The camping scenario assumes two overnight camping events per year in contaminated areas and the accidental ingestion of contaminated surface water and sediments.”

Comment: There is nothing here to show that a study has been done of the overnight camping habits of commercial river personnel or other members of the public who camp, wade, and boat on the Colorado. There is no discussion of purposeful ingestion of contaminated surface water by campers and boaters. River water is often settled and used and consumed by boaters on the river.

Response:

See response to comment #18.

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Document #706 Comment #22 Commentor: Fields, Sarah

In sum, the DEIS fails to provide an accurate assessment of the potential of humans to be exposed to contaminants downstream from the Portal below the site to Lake Powell.

Response:

DOE believes that the EIS provides a reasonable evaluation of the potential consequences from this type of hypothetical catastrophic event.

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Document #706 Comment #23 Commentor: Fields, Sarah

DEIS (page 4–52): “Table 4–16 presents the estimated maximum level of contaminants in water and sediment that would still be protective of human (and ecological) health. The basis for these levels is provided in Appendix D.”

Comment: The DEIS does not provide a statutory and regulatory basis for applying what the DEIS believes is the “Maximum Exposure Level of Contaminants Protective of Human Health and Ecological Resources.”

The DEIS fails to provide specific information regarding the applicable state of federal regulations that would apply to the tailings and contamination from the tailings that are released from the site by a natural event. Should the tailings enter the river, they will still be “residual radioactive material,” and subject to the authority of UMTRCA and EPA and possibly other state and federal regulations.

UMTRCA defines “residual radioactive material”:

(7) The term “residual radioactive material” means

(A) waste (which the Secretary determines to be radioactive) in the form of tailings resulting from the processing of ores for the extraction of uranium and other valuable constituents of the ores; and

(B) other waste (which the Secretary determines to be radioactive) at a processing site which relate to such processing, including any residual stock of unprocessed ores or low-grade materials. [42 U.S.C. Sec. 7911. Definitions, at (7).]

Any discussion of the maxim levels of contaminants must be accompanied by a clear, complete discussion of ALL the Federal and State regulations that would come into play if the tailings were left in place and if the tailings and contaminated materials from the site enter the Colorado River during a natural event. The DEIS should also discuss which Federal and State statutes, regulations, and policies, that would be violated by the release of tailings and contamination from the tailings into the Colorado River. See discussion at 2.16 below.

Response:

As footnoted on Table 4–16, the bases for determining exposure concentrations are provided in Appendix A2 for each contaminant. Section 7.0 of the EIS identifies the federal and state regulations that may apply to the actions assessed in the EIS. In addition, Section 2.6.4 identifies DOE’s and the State of Utah’s differing opinions on applicable standards for releases to the Colorado River.

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Document #706 Comment #24 Commentor: Fields, Sarah

DEIS (page 4–52): “For the purpose of analysis, a large disposal cell failure (20 to 80 percent of the tailings eroded) was assumed to occur over a short duration (10 hours). Although such a large event would be unlikely, the analysis is useful in projecting potential environmental consequences of a worst-case scenario. The Colorado River was assumed to be at high flood stage during the tailings release. Concentrations of uranium, ammonia as nitrogen, and radium-226, the most prevalent contaminants, were estimated for the failure scenarios.”

Comment: The DEIS must develop a broader, more inclusive, estimation of the release of contaminants from the impoundment. The DEIS fails to provide a scientific rationale for putting such limitations on any assessment of the impacts of a large disposal failure. There is no data to support the assumption that the release of tailings into the river would occur over a single 10-hour period.

Response:

This is a highly uncertain, hypothetical bounding analysis of a future, extremely unlikely event. This type of evaluation is required under NEPA because it does help identify the differences among the alternatives. Data do not exist to support many of the assumptions in this type of evaluation, including the single 10-hour period. The assumption of a single 10-hour period is intended to represent a worst-case scenario. The impacts of slower releases over longer periods of time could probably be mitigated by future engineering controls.

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Document #706 Comment #25 Commentor: Fields, Sarah

DEIS (page 4–53): “Sediment released during a catastrophic event would deposit in the river bottom or along banks or become part of the suspended load. Fine-grained portions of the sediment would remain in suspension and rapidly transport downstream. Where the river overflowed its banks, fine-grained sediment would be deposited by settling in standing water.”

Comment: Here the DEIS only evaluates the contamination and sediments that travel downstream, away from Moab site and away from the Moab Valley. This leaves out a whole area that would be impacted by the release of tailings and contaminants during a flood.

The maps contained in the recent USGS report by Terry A. Kenney (cited above) show that during flood events river water would inundate the Scott M. Matheson Wetlands Preserve (Wetlands) and parts of Moab Valley. A similar flood scenario is also postulated in the DEIS.

The DEIS fails to access the environmental impacts resulting from dispersion of contaminated water and sediments in the Wetlands or Moab Valley. This clearly contradicts the DOE’s assumptions set forth elsewhere in the DEIS.

Response:

DOE cannot determine a plausible mechanism for catastrophic failure of an on-site disposal cell; the environmental consequences of such a hypothetical failure are characterized in Section 4.1.17 to support decision-making. As confirmed by the recent USGS report referenced in the comment, the velocities of a 100-year, 500-year, or even the PMF would not be sufficient to cause the catastrophic failure of the disposal cell but merely its inundation, which is evaluated in Section 4.1.3.1. The post-flood concentrations of ammonia (Section 4.1.3.1) would not be expected to exceed aquatic standards. Therefore, the Matheson Wetlands Preserve and the Moab Valley would not be impacted by floodwaters inundating the Moab pile. Therefore, in the hypothetical catastrophic failure analysis, flow into the Matheson Wetlands Preserve was not assumed.

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Document #706 Comment #26 Commentor: Fields, Sarah

DEIS (page 4–53): “The concentrations of contamination in backwater areas would depend on (1) the proportion of fine-grained tailings to clean suspended load, (2) concentration in the suspended tailings, and (3) the mass deposited over a given area. During periods of low flow, fine-grained sediment would be deposited; during high flow, these deposits would be remobilized and transported farther downstream. The sediment would be dispersed and mixed with clean sediment during transport, causing a continual decrease in contaminant load. Based on detailed studies of deposition of radioactive sediment in the Colorado River Basin, it would be expected that very small amounts of contamination would accumulate in the main river channel (HEW 1963).”

Comment: This paragraph references a June 1963 U.S. Department of Health, Education, and Welfare report, entitled “Radiological Content of Colorado River Basin Bottom, August 1960 – August 1961.” The DEIS fails to address how and why this 40-year old study is in any way related to the discussion at hand. The study itself does not discuss the amount and types of contaminants that entered the Colorado River from uranium mills. They only refer to “uranium mill wastes.” The study ends with a discussion of “Future Work Desired,” which includes the statement, “Another aspect which deserves special consideration is a study of the distribution of dissolved radium in river water, radium in transported (or suspended) sediment, bottom sediment material and aquatic biota.” It also states, “Such a study would yield additional information on the fate of radium in the water environment.”

Obviously, the HEW study was not meant to be a definitive study of radium in a river environment. In the past 40 years there should be numerous studies related to the fate of radium in a water environment. The DEIS fails to make use of such studies.

Response:

The citation of the Department of Health, Education and Welfare (HEW) study is not meant to offer definitive data on the distribution of radionuclides, but only to offer some support for the concept that very fine-grained sediment (such as radioactive tailings) are likely to be distributed in overbank deposits rather than river channels. The HEW study specifically addresses the Colorado River and radionuclides and therefore was judged to be relevant.

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Document #706 Comment #27 Commentor: Fields, Sarah

DEIS (page 4–53): “The most significant mill-related contaminant in the sediment would be radium-226 because of its low tendency to partition (dissolve) in water and its abundance in the tailings (HEW 1963).”

Comment: The 1963 HEW report discusses some of the complexities related to the dissolution of radium in water. The report states that dissolution is related to the chemistry of the radium bearing material, the chemistry of the leaching liquid (i.e., river water), the amount radium in relation to the volume of the leaching liquid, agitation, a cycle of dissolution and precipitation, and time. The DEIS simplifies a very complex process. The assumption that there will be minimal dissolution of radium-226 from the impoundment is unsubstantiated.

Response:

The limiting value (no dissolution) of radium-226 is used as a worst-case scenario for estimating the impact of the suspended load. Using this value, all radium-226 is assumed to remain in the suspended load. This assumption is probably only slightly conservative because it is likely that most of the radium-226 is partitioned to the solid phase.

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Document #706 Comment #28 Commentor: Fields, Sarah

DEIS (page 4–54 to 4–56): Here, the DEIS discusses and addresses the potential adverse impacts on the environment after a catastrophic cell failure.

Comment: The DEIS acknowledges some of the many unknowns, uncertainties, and the fact that there would be long-term and short-term adverse consequences to the environment due to a catastrophic release of the tailings into the river. There is an acknowledgement that “specific impacts to endangered species are difficult to access.”

The DIES presents no scientific bases for the various assumptions and “likely” scenarios related to environmental impacts of a failure of the impoundment. No study has been done that the DEIS can refer to or rely on for information regarding the significant short-term, long-term, direct, and indirect consequences of one or more releases of tailings into the Colorado River.

Response:

The introductory discussion in Section 4.1.17 (Disposal Cell Failure from Natural Phenomena) provides the assumptions DOE used to describe the expected consequences and expected risks of a catastrophic disposal cell failure. DOE believes the likelihood of such an event over the design life of an on-site disposal cell is very small. DOE also believes that the assumptions used to define and evaluate failure scenarios are both reasonable and sufficient for an evaluation of alternatives in this EIS. DOE acknowledges there are uncertainties related to the failure of the disposal cell, which are addressed in Tables S–1 and 2–33, item #10.

Document #706 Comment #29 Commentor: Fields, Sarah

This section completely fails to acknowledge the fact that Moab and Grand County economy is a recreational tourist-based economy. Much of the recreation is associated with boating on the Colorado River. Any failure of the impoundment would have a severe negative economic impact on the local and regional community. Boating on the river downstream from the impoundment would be closed for an unknown period of time. That is, use of the Colorado River, as a navigable waterway would not be possible (impeded). The river-boating economy could be completely destroyed.

Response:

Section 3.1.18.1 does indicate that the tourism/recreation industry is the primary employer in the area. The environmental consequences of a catastrophic failure of an on-site disposal cell are described in Section 4.1.17 in order to distinguish between the on-site and off-site disposal alternatives and support decision-making. Potential human health impacts are identified. Potential socioeconomic impacts are speculative and were not included in the analysis of this highly unlikely failure scenario.

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Document #706 Comment #30 Commentor: Fields, Sarah

There is no mention of the impacts on the major downstream agricultural, drinking water, and recreational uses of the Colorado.

Response:

Section 4.1.17 of the EIS addresses the natural processes that could potentially cause a failure of the disposal cell at the Moab site and the expected consequences and potential risks. These include impacts to downstream users, aquatic receptors, backwaters, terrestrial biota, and adjacent areas. The focus of the analysis is to evaluate the potential consequences of contaminants in the water and sediments of the Colorado River based on a significant (catastrophic) release of tailings. Although the likelihood of a significant release would be very small, this type of failure was assumed to occur in order to evaluate the potential consequences (risks).

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Document #706 Comment #31 Commentor: Fields, Sarah

There is no realistic discussion of a catastrophic tailings pile failure as a National Disaster.

Response:

In the EIS, DOE describes the potential environmental impacts of both a catastrophic and a long-term disposal cell failure under the on-site disposal alternative (see Section 4.1.17). Although there are no plausible conditions under which a catastrophic disposal cell failure could occur under this alternative, DOE assumed that such a failure would occur in order to evaluate the potential consequences. Whether such a failure would be considered a national disaster is not relevant to the identification of potential impacts.

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Document #706 Comment #32 Commentor: Fields, Sarah

The adverse impacts to the Wetlands and Moab Valley by a catastrophic failure of the tailings are completely ignored. Right now, DEIS answers to questions related to the environmental impacts of “Disposal Cell Failure from Natural Phenomena” are by-guess-and-by-golly.

These significant impacts demand a detailed and comprehensive study.

Response:

The catastrophic failure analyses (Section 4.1.17) were done as a screening tool to inform decision-makers of the possible differences among the on-site and off-site disposal alternatives, even though DOE believes that there are no plausible mechanisms for such a failure.

Because the catastrophic flood is assumed to occur, even though such an event is not plausible, no attempt was made to postulate the effect such a flood would have on the rest of Moab Valley. The EIS analyses are based on sound assumptions and valid calculations sets generated by credentialed scientists and engineers with many years of experience at other UMTRCA sites.

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Document #706 Comment #33 Commentor: Fields, Sarah

DEIS (page 4–55): “If mitigated, long-term failure would not likely result in negative impacts to aquatic biota. This type of release, which is possible at all UMTRCA Title I sites, can be mitigated. DOE’s newly created (2003) Office of Legacy Management is responsible for monitoring and mitigating this type of release.”

Comment: Here the DEIS does acknowledge the DOE’s responsibility for mitigation of impact from a release of tailings into the river environment. However, there is no actual assessment of the types of mitigation required, the clean-up standards to be applied, costs, the possibility that mitigative measures would not be possible or would be ineffective, etc.

The DEIS states that this type of release “is possible at all UMTRCA Title I sites.” No data is given to support this false, misleading, inaccurate statement.

Mill tailings at other similar Title I sites have been removed from the floodplain of their respective rivers. Some of the Title I sites were not even located on a river in the first place. It is impossible for the tailings at other Title I sites to be released into the Colorado River or one of its tributaries by a catastrophic flood or river meander. The Colorado River is the 5th largest river in the United States. There is no other comparable Title I situation.

Response:

The mitigation referred to in Section 4.1.17 would include a barrier wall to further reduce the already low likelihood of impacts from river migration and slide slope armaments on the on-site disposal cell to mitigate impacts from flood erosion (discussed in Section 2.1.3.1). It is DOE’s opinion that no plausible mechanism exists to induce a catastrophic failure. However, to support comparison among alternatives, the accident is assumed to occur and the consequences are characterized. To further attempt to quantify the cleanup of a highly unlikely event would be so speculative as to be meaningless. Although some UMTRCA sites were or are still located in floodplains, it was imprecise to imply that a catastrophic failure and associated release to a river environment was or is possible at all UMTRCA Title I sites; therefore, the phrase has been deleted from Section 4.1.17.

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Document #706 Comment #34 Commentor: Fields, Sarah

Requirements of NEPA and CEQ Regulations

CEQ regulations that were promulgated in response NEPA are found at 40 C.F.R. §§ 1500-1508. These regulations set forth the requirements for draft EISs. Below is a discussion of how DEIS Section 4.1.17 meets, or fails to meet, some of the CEQ and NEPA requirements.

CEQ regulation that implement the procedural provisions of NEPA demands that the requirements of other environmental laws and policies that are applicable to the deposition of tailings and contaminated materials from the tailings into the Colorado River be addressed in the DEIS. See 40 C.F.R. § 1501.2, “Implementation.”

Document #706 Comment #34 - continued

CEQ regulation also demands that the agency address “whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.” See 40 C.F.R. § 1508.27(b)(10).

This section of the DEIS does not provide such a discussion. The DEIS does not address the federal and state statutes and regulations are pertinent to the environmental impacts of a failure of the Moab Mill tailings impoundment. The DEIS does not address the possibility of the violation of other Federal, State, or local laws or regulations due to the presence of the tailings on the floodplain of a navigable water or the release of the tailings into such water, which includes nearby wetlands.

Some of applicable Federal and State regulations and statutes that should be addressed in any assessment of impacts from “Disposal Cell Failure from Natural Phenomena” are:

- a. The Rivers and Harbors Act of 1899, Section 13, 1899 Rivers and Harbors Act (42 U.S.C. Title 33, Chapter 9, Section 407), which prohibits 1) the discharge of refuse matter of any kind or description whatever from the shore or mill into any navigable water and prohibits 2) material of any kind to be deposited on the bank of any navigable water where it shall be liable to be washed into such navigable water by storms or floods, or otherwise, whereby navigation shall or may be impeded or obstructed.
- b. Utah State Clean Water Act Implementing Regulations (UAC. R317-2-13). The State of Utah is authorized to protect the Colorado River as a raw water source and for recreation, boating, wading, game fish, aquatic life, and agricultural use.
- c. Endangered Species Act of 1973 (PL 93-205, 87 Stat 884, 7 USC 136, as amended)
- d. Federal Water Pollution Control Act (Clean Water Act of 1972) (PL 92-500, PL 100-433, 86 Stat 816, USC 9 sec. 1251 et seq., as amended, 33 USC sec. 1251-1356, and 1987 Federal Water Quality Act)
- e. Emergency Planning and Community Right-to-Know Act (PL 99-499 Title III of SARA)
- f. Federal Tort Claims Act (PL chapter 753 Title IV, 60 Stat 842, 28 USC 1346b, 2671-80)
- g. Federal Water Pollution Control Act (Clean Water Act of 1972) (PL 92-500, PL 100-433, 86 Stat 816, USC 9 sec. 1251 et seq., as amended, 33 USC sec. 1251-1356, and 1987 Federal Water Quality Act)
- h. National Park Service Organic Act of 1916 (PL Chapter 408, 39 Stat 535 et seq., 16 USC 1)
- i. Historic Sites, Buildings and Antiquities Act of 1935 (PL Chapter 593, 49 Stat 666, 16 USC 461 et seq.)

Document #706 Comment #34 - continued

j. Protection of Wetlands (E.O. 11990, 1977 42 FR 26961, 3 CFR 121 (Supp 177), 42 USC 4321)

k. Indian Sacred Sites* (E.O. 13007, 61 FR 26771)

Response:

DOE is not proposing to discharge (as defined by the cited regulations) any material into the Colorado River as part of any alternative. For purposes of analysis, DOE did evaluate a catastrophic failure of a disposal cell under the on-site disposal alternative, although there are no plausible circumstances under which such a failure could occur. For this reason, DOE did not address, and is not required to address, violations of laws that might apply at the time a hypothetical failure might occur. As explained in Section 1.6 of the EIS, DOE entered into agreements with 12 federal, state, tribal, county, and local agencies to be cooperating agencies in the development and preparation of the EIS. To the fullest extent possible, DOE has engaged the cooperating agencies that have responsibility for enforcing many of the laws cited in the comment (for example, the USF&WS for endangered species, the State of Utah for water quality issues, and the Ute Mountain Ute Tribe for matters potentially affecting Indian sacred sites). In accordance with CEQ and DOE regulations, the EIS identifies federal and state regulations that might apply to the proposed actions analyzed in the EIS.

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Document #706 Comment #35 Commentor: Fields, Sarah

CEQ regulation requires that the DEIS shall include discussions of “direct effects and their significance” and “indirect effects and their significance.” As shown above, this section did not provide a full discussion of the direct and indirect effects and their significance related to a failure of the impoundment. Too many of the effects were minimized or completely ignored . See 40 C.F.R § 1502.16 (Environmental consequences) (a) and (b).

Response:

In the EIS, DOE describes the potential environmental impacts of both a catastrophic and a long-term disposal cell failure under the on-site disposal alternative (see Section 4.1.17). Although there are no plausible conditions under which a catastrophic disposal cell failure could occur under this alternative, DOE assumed that such a failure would occur in order to evaluate the potential consequences. The potential environmental impacts analyzed are those to human health and safety and to biological resources. The commentor does not identify other direct or indirect effects that should have been addressed.

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Document #706 Comment #36 Commentor: Fields, Sarah

CEQ regulation requires that the DEIS address the possible conflicts between leaving the tailings in place, with the potential of adverse impact from an impoundment failure, and the “objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.” The DEIS failed to mention, let alone address, pertinent objectives of Federal, State, local, tribal, and regional “land use plans, policies and controls for the area concerned.” This is especially pertinent because the land that would be impacted by a failure of the impoundment at Moab, in land that belongs to Federal and Tribal governments. See 40 C.F.R § 1502.16 (c).

Response:

Because the likelihood of a catastrophic failure of a disposal cell under the on-site disposal alternative is so remote, DOE believes that it would be speculative to attempt to address how such a failure might affect federal, regional, state, local, or tribal land use plans, policies, and controls in effect at the time such a failure might occur. In addition, a long-term, slow-release disposal cell failure could be mitigated in order to avoid such effects. Also see response to comment #35.

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Document #706 Comment #37 Commentor: Fields, Sarah

CEQ regulation requires that the DEIS consider “urban quality” and “historic and cultural resources” in the evaluation of the environmental consequences. The DEIS failed to identify and address the impacts to the urban Grand County community environmental and quality of life in the event of a disposal cell failure. The DEIS failed to address impacts on the historic and cultural resources on the Colorado River downstream from the Moab site that could be impacted by disposal cell failure. There are numerous cultural resources in the vicinity of the river downstream. These are neither identified nor addressed. See 40 C.F.R § 1502.16(g).

Response:

The potential environmental impacts analyzed are those to human health and safety and to biological resources. Because the likelihood of a catastrophic failure of a disposal cell under the on-site disposal alternative is so remote, DOE believes that it would be speculative to attempt to address how such a failure might affect the urban community or historic and cultural resources in existence at the time such a failure might occur. In addition, a long-term, slow-release disposal cell failure could be mitigated in order to avoid such effects. Also see response to comment #35.

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Document #706 Comment #38 Commentor: Fields, Sarah

CEQ regulation requires that the DEIS address the means to mitigate adverse environmental impacts. This assumes that the adverse impacts are completely and accurately identified. This has not been done in this section. The DEIS does not state the extent of DOE responsibility for the contamination from the release of tailings from the site into the river. There is no discussion of exactly what could be done to clean up the contaminated river and wetland environment in the event of the dispersal of tailings and contamination in the Moab Valley and downstream. The DEIS does not state how the DOE would rectify the impact from a tailings impoundment failure by repairing, rehabilitating, or restoring the affected environment. See 40 C.F.R § 1502.16(h).

Response:

The potential environmental impacts analyzed are those to human health and safety and to biological resources. The likelihood of a catastrophic failure of a disposal cell under the on-site disposal alternative is extremely remote; therefore, DOE believes that it would be speculative to attempt to address the extent of DOE's responsibility for the resulting contamination or cleanup, or of the cleanup methods that could be used at the time such a failure might occur. Also see response to comment #35.

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Document #706 Comment #39 Commentor: Fields, Sarah

CEQ regulation requires that "agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." It requires that agencies "identify any methodologies used and shall make explicit reference by footnote to the scientific and other sources relied upon for conclusions in the statement." In this section the DOE did not meet this requirement. The various assumptions, hypotheses, and conclusions are not footnoted and there are numerous inaccurate, incomplete, and unsubstantiated statements. See 40 C.F.R. § 1502.24 (Methodology and scientific accuracy).

Response:

The commentor does not identify any specific statements that are "inaccurate, incomplete, and unsubstantiated" or why. Each EIS chapter lists the references used in the development of information in that chapter. In addition, the EIS includes numerous appendixes that explain the analysis methodologies.

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Document #706 Comment #40 Commentor: Fields, Sarah

CEQ regulation also says that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. There is no such an analysis in the DEIS related to a tailings impoundment failure. There is no recognition that such a failure would constitute “National Disaster.” See 40 C.F.R. § 1508.27(a).

Response:

In the EIS, DOE describes the potential environmental impacts of both a catastrophic and a long-term disposal cell failure under the on-site disposal alternative (see Section 4.1.17). Although there are no plausible conditions under which a catastrophic disposal cell failure could occur under this alternative, DOE assumed that such a failure would occur in order to evaluate the potential consequences. The potential environmental impacts analyzed are those to human health and safety and to biological resources. The analyses do not support the commentor’s assertion that a catastrophic failure would be on the scale of a national disaster.

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Document #706 Comment #41 Commentor: Fields, Sarah

“Significantly as used in NEPA requires considerations of both context and intensity.” See 40 C.F.R. § 1508.27(b)(1) to (10). Intensity means the severity of impact. NEPA requires that the following should be considered in evaluating intensity:

(a) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

(b) The degree to which the effects on the quality of the human environment are likely to be highly controversial.

(c) The degree to which the possible effects on the human environment is highly uncertain or involves unique or unknown risks.

(d) The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

(e) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

In the discussion of the impacts of a significant release of the tailings, the DEIS failed to be considered these aspects in evaluating intensity of the environmental consequences.

Response:

In the EIS, DOE describes the potential environmental impacts of both a catastrophic and a long-term disposal cell failure under the on-site disposal alternative (see Section 4.1.17). Although there are no plausible conditions under which a catastrophic disposal cell failure could occur under this alternative, DOE assumed that such a failure would occur in order to evaluate the potential consequences. The potential environmental impacts analyzed are those to human health and safety and to biological resources. Because the likelihood of a catastrophic failure of a disposal cell under the on-site disposal alternative is so remote, DOE believes that it would be speculative to attempt to address the elements noted by the commentor.

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Document #706 Comment #42 Commentor: Fields, Sarah

Regulatory Requirements

Section 7 (pages 7–1 to 7–9) of the DEIS sets forth various statutes, regulations, executive orders, and policy guidances that the DOE believes are applicable to the Moab Mill Project.

DEQ NEPA regulation at 40 C.F.R. § 1502.2(d) requires that “environmental impact statements shall state how alternatives considered in it and decisions based on it will or will not achieve the requirements of sections 101 and 102(1) of [NEPA] and other environmental laws and policies.” See 40 C.F.R. § 1501.2, (Implementation). However, there is no section of the DEIS that addresses the applicability of NEPA and the other laws and policies to specific alternatives. Any discussion of regulatory requirements is scattered within the document and difficult to find.

NEPA also demands that the agency address “whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.” See 40 C.F.R. § 1508.27(b)(10). There is no such discussion in the DEIS.

Response:

The EIS overall addresses the potential environmental impacts of the on-site and off-site disposal alternatives and the No Action alternative. Within the document, DOE addresses the potential impacts of each alternative on geology and soils, air quality, ground water, surface water, floodplains and wetlands, aquatic ecology, terrestrial ecology, land use, cultural resources, noise and vibration, visual resources, infrastructure, solid waste management, socioeconomics, human health, traffic, and environmental justice. The EIS also describes the potential environmental consequences of a disposal cell failure under the on-site disposal alternative and the No Action alternative. DOE believes that it has fully complied with Sections 101 and 102 of NEPA and all aspects of the CEQ and DOE NEPA regulations.

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Document #706 Comment #43 Commentor: Fields, Sarah

Section 7.1.7 (page 7–4) discusses the Clean Water Act. It states that “mill tailings are exempt from the definition of a pollutant,” and implies that the Clean Water Act is not applicable to the tailings and any discharges from the tailings into ground and surface water, implying that the Moab Mill tailings are exempt from Clean Water Act regulations. The DEIS fails to provide a basis for this pollutant exemption.

The applicable EPA definition of “pollutant” under the Clean Water Act regulations is found at 40 C.F.R. § 122, entitled “EPA Administered Permit Programs: The National Pollutant Discharge Elimination System,” Subpart A (“Definitions and General Program Requirements”). The DEIS references these EPA regulations, which are part of the EPA implementation of the Clean Water Act. Section 122.2, entitled “Definitions,” states, in pertinent part:

Sec. 122.2 Definitions.

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Pollutant means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, **radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.))**, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. It does not mean:

Note: Radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear materials. Examples of materials not covered include radium and accelerator-produced isotopes. See *Train v. Colorado Public Interest Research Group, Inc.*, 426 U.S. 1 (1976). [Emphasis added.]

First, the definition of pollutant says that it includes “radioactive materials (except those regulated under the Atomic Energy Act of 1954 (AEA), as amended (42 U.S.C. 2011 et seq.)).” Next, the definition provides a note of clarification: “Radioactive materials covered by the Atomic Energy Act are those encompassed in its definition of source, byproduct, or special nuclear materials.” It also states that materials not covered by the AEA “include radium.”

According to the DEIS, the AEA requirements for the Moab Mill Tailings are found at 42 U.S.C., Chapter 88 (“Uranium Mill Tailings Radiation Control”), §§ 7901 et seq. These regulations apply to UMTRCA Title I inactive mill tailings sites, such as the Moab Mill Project site. These inactive sites are the responsibility of the DOE. Congress amended the AEA in October 2000 and designated the Moab Mill site as a Title I site under UMTRCA. See the Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Public Law No. 106-398). Because of that authorization act, the Moab Mill tailings are no longer regulated under 42 U.S.C. §§ 2021 et seq., which provides for (among other things) regulation of commercial uranium and thorium processing sites by the NRC and Agreement States.

Sec. 7911. Definitions

(7) The term “residual radioactive material” means

(A) waste (which the Secretary determines to be radioactive) in the form of tailings resulting from the processing of ores for the extraction of uranium and other valuable constituents of the ores; and

(B) other waste (which the Secretary determines to be radioactive) at a processing site which relate to such processing, including any residual stock of unprocessed ores or low-grade materials.

Under the provisions of Title I, the Moab Mill tailings now fall within the definition of “residual radioactive material.” They no longer fall under the definitions of source, byproduct, or special nuclear materials found in 42 U.S.C. Chapter 23. (It might be argued that the tailings contain “source material” and, thus, are exempt from the definition of “pollutant.” However, that would only exempt the radioactive uranium portion of the tailings, not the other radioactive

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(e.g., radium-226), toxic, and hazardous constituents of the tailings and ground and surface water contamination from the tailings. The DOE has authority under Title I for “residual radioactive material,” but not for “source material.”)

There is no indication that the EPA has exempted “residual radioactive materials,” or radioactive materials “regulated” under Sections 7901 et seq. of 42 U.S.C., from the regulatory definition of the term “pollutant.”

The DEIS should clarify this matter of statutory authority under the Clean Water Act, with cites.

Response:

Residual radioactive material is exempt from the definition of a pollutant under 40 CFR 122.2 and also under UAC R317-8 (1.5). This interpretation was upheld by the U.S. 9th Circuit Court of Appeals (*Waste Action Project v. Dawn Mining Corporation*, February 4, 1998). However, DOE has consistently taken the position at UMTRCA Title I sites, including Moab, that although the site is exempt from this requirement of the Clean Water Act, DOE is committed to working with federal, state, and local regulatory agencies to protect human health and the environment. DOE has demonstrated that commitment since assuming management of the Moab site in October 2003; examples include implementing interim actions to control surface water contamination and maintaining ongoing consultation with the USF&WS.

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Document #706 Comment #44 Commentor: Fields, Sarah

Section 7.1.8 (page 7–4) discusses the applicability of the Rivers and Harbors Act of 1899 (RHA). The only section discussed is Section 10. There is no mention of Section 13 of the RHA, sometimes known as the “Refuse Act” (42 U.S.C. Title 33, Chapter 9, Section 407). This is strange, because in the scoping process, I submitted an extensive comment regarding the applicability of this statute to the Moab Mill situation. Further, this issue is not listed in the DEIS under “Issues/Concerns Raised in the Scoping” (Section 1.5.2, pages 1–13 to 1–20).

Section 13 of the RHA, entitled “Deposit of refuse in navigable waters generally,” reads:

It shall not be lawful to throw, discharge, or **deposit**, or cause, **suffer**, or procure to be thrown, discharged, or Deposited either from or out of any ship, barge, or other floating craft of any kind, **or from the shore**, wharf, manufacturing establishment, **or mill of any kind, any refuse matter of any kind or description whatever** other than that flowing from streets and sewers and passing therefrom in a liquid state, **into any navigable water of the United States**, or into any tributary of any navigable water **from which the same shall float or be washed into such navigable water**; and it shall not be lawful to deposit, or cause, suffer, or procure to be deposited material of any kind in any place on the bank of any navigable water, or on the bank of any tributary of any navigable water, where the same shall be liable to be washed into such navigable water, either by ordinary or high tides, or by **storms or floods**, or otherwise, **whereby navigation shall or may be impeded or obstructed**: Provided,

Document #706 Comment #44 - continued

That the Secretary of the Army, whenever in the judgment of the Chief of Engineers anchorage and navigation will not be injured thereby, may permit the deposit of any material above mentioned in navigable waters, within limits to be defined and under conditions to be prescribed by him, provided application is made to him prior to depositing such material; and whenever any permit is so granted the conditions thereof shall be strictly complied with, and any violation thereof shall be unlawful. [Emphasis added.]

The pertinent provisions of this statute read:

- 1) It shall not be lawful to discharge, or deposit, or cause, suffer, or procure to be deposited from the shore or mill of any kind any refuse matter of any kind or description whatever into any navigable water of the United States from which the same shall float or be washed into such navigable water; and
- 2) It shall not be lawful to deposit, or cause, suffer, or procure to be deposited material of any kind in any place on the bank of any navigable water where the same shall be liable to be washed into such navigable water by storms or floods, or otherwise, whereby navigation shall or may be impeded or obstructed.

With respect whether the Colorado River in the vicinity of the Moab Mill is a “navigable water,” the U.S. Army Corps of Engineers informed the DOE that “the [Moab Mill] project site is also located within a declared navigable reach of the Colorado.” See letter from Ken Jacobson, Chief, Colorado/Gunnison Basin Regulatory Office, Grand Junction, Colorado, U.S. Army Engineer District—Sacramento, Department of Army, to Joel Berwick, Grand Junction Office, DOE, August 14, 2003; Attachment 2 to “Migration Potential of the Colorado River Channel Adjacent to the Moab Project Site: Letter Report,” MOA 19.1.2, November 2003, Rev. 2.

The DEIS should contain a full, authoritative discussion of the applicability of both Section 13 prohibitions to the Moab Mill site. This statute should be addressed pursuant to the requirements of 40 C.F.R. § 1502.2(d) and 40 C.F.R. § 1508.27(b)(10).

Response:

DOE is not proposing to discharge any material into the Colorado River as part of any alternative. For purposes of analysis, DOE did evaluate the catastrophic failure of a disposal cell under the on-site disposal alternative, although there are no plausible circumstances under which such a failure could occur. For this reason, DOE did not address, and is not required to address, violations of laws that might apply at the time a hypothetical failure might occur.

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Document #706 Comment #45 Commentor: Fields, Sarah

Section 7.3.1 (page 7–8) Discusses the State of Utah Clean Water Act Implementing Regulations found in the Utah Administrative Code (U.A.C.) Section R317-2-13 (Water Quality Standards).

This very short section indicates that the Colorado River is protected by the State as a raw water source, for boating, wading, water skiing, warmwater game fish and necessary aquatic organisms in their food chain, and agricultural uses.

But, contrary to the requirements of 40 C.F.R. § 1502.2(d) and 40 C.F.R. § 1508.27(b)(10), the DEIS fails to “state how alternatives considered in it and decisions based on it will or will not achieve the requirements of” R317-2-13. Additionally, contrary to the requirements of 40 C.F.R. § 1508.27(b)(10), the DEIS fails to address whether the current situation or any of the proposed alternatives threaten a violation of R317-2-13.

The DOE must implement these CEQ requirements in all respects.

Response:

DOE and the state disagree on the applicability of state ground water standards to remediation of the Moab site. The views of both entities are provided in Section 2.6.4 in accordance with CEQ’s requirements.

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Document #706 Comment #46 Commentor: Fields, Sarah

The DEIS fails to list and address other requirements that would be violated or would in some way be applicable in the event of a catastrophic failure of the tailings impoundment. These would include the Emergency Planning and Community Right-to-Know Act (PL 99-499 Title III of SARA Sec. 300-330, 100 Stat 1725, 42 USC 1101), the Federal Tort Claims Act (PL chapter 753 Title IV, 60 Stat 842, 28 USC 1346b, 2671-80), and the National Park Service Organic Act of 1916 (PL Chapter 408, 39 Stat 535 et seq., 16 USC 1).

Response:

For purposes of analysis, DOE did evaluate the catastrophic failure of a disposal cell under the on-site disposal alternative, although there are no plausible circumstances under which such a failure could occur. For this reason, DOE did not address, and is not required to address, violations of laws that might apply at the time a hypothetical failure might occur.

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Document #706 Comment #47 Commentor: Fields, Sarah

CEQ regulation at 40 C.F.R. § 1502.16(c) requires that the DEIS address “possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.” The DEIS discussion of Regulatory Requirements fails to identify and address specific objectives of Federal, regional, State, and local, tribal land use plans, policies and controls” for the impacted areas of concern. Further, there is no such discussion elsewhere in the DEIS.

Response:

The UMTRCA specifies that mill tailings shall be remediated to protect human health and the environment. DOE solicited the participation of several cooperating agencies at the federal, state, and local levels to ensure that conflicts were identified and, to the extent practicable, resolved prior to issuing the draft EIS to the public for comment. Based on communications with these agencies, DOE determined that the Klondike Flats and Crescent Junction sites are located in areas consistent with the Federal Land Policy and Management Act and BLM resource management plans. The Moab site is currently owned and managed by DOE, and the White Mesa Mill site is owned and operated by IUC. All these considerations, including potential conflicts with haul routes and borrow areas, are addressed in the EIS.

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Document #706 Comment #48 Commentor: Fields, Sarah

Section 7.1.2 (pages 7–1 to 7–3) addresses the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA). Unfortunately, this section also includes the implementing EPA regulations, rather than providing a separate section for the discussion of 40 C.F.R. Part 192, Subparts A, B, and C. The DEIS mixes the provisions of Title I of UMTRCA with the applicable provisions of Part 192.

Neither the discussion of Title I nor the discussion of applicable subparts of 40 C.F.R. Part 192 state how alternatives considered in the DEIS and decisions based on the DEIS will or will not achieve the requirements of UMTRCA and Part 192. This is contrary to the expectation set forth in 40 C.F.R. § 1502.2(d).

Response:

The compliance goals against which all alternatives are compared throughout the EIS are derived from 40 CFR 192 or other applicable standards.

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Document #706 Comment #49 Commentor: Fields, Sarah

In sum, the DEIS discussion of Regulatory Requirements, itself, fails to meet the regulatory requirements set forth in the applicable CEQ regulations implementing NEPA.

Further, DOE NEPA regulations state that, “to the extent possible, DOE shall determine the applicability of other environmental requirements early in the planning process, in consultation with other agencies when necessary or appropriate, to ensure compliance and to avoid delays.” See 10 C.F.R. § 1021.341 (Coordination with other environmental review requirements). As shown above, this directive was not fully implemented.

The CEQ regulations were promulgated for a reason. It was the intent of the NEPA and the CEQ that all significant circumstances affecting a major federal action be considered by the public and the agency. When an agency leaves pertinent information out of a DEIS, it limits the ability of the public and the agency to make sound environmental decisions. This is especially relevant in these circumstances, where there has been a massive failure of the regulatory oversight process since 1956. Fifty years of unsound Moab Mill decision making with respect the protection of the environment and the health and safety of the workers and the public is an unfortunate heritage. It is not a heritage to build on.

Response:

As explained in Section 1.6 of the EIS, DOE entered into agreements with 12 federal, state, tribal, county, and local agencies to be cooperating agencies in the development and preparation of the EIS. See response to comment #42.

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Document #706 Comment #50 Commentor: Fields, Sarah

White Mesa Alternative

It was not until less than two weeks ago, at my request, that the DOE made one of the important documents related to the White Mesa proposal publicly available and placed it in the DOE reading files in Grand and San Juan Counties. The International Uranium (USA) Corporation (IUSA) report, Preliminary Cost Estimate and Technical Report: Moab Tailings Project White Mesa Slurry Pipeline Option. May 9, 2003, is a large document that, according to law, should have been made available to the public last May.

Although the DEIS discussion of the White Mesa Alternative is, in part, based on that submittal, it is not referenced in the DEIS. The failure of the DOE to make this record publicly available was a clear violation of the AEA (42 U.S.C. Chapter 88, § 7924(e); UMTRCA, Section 114(e), Documentation of information; public availability; trade secrets and other disclosure exempt information). Section 7924(e) states:

The Commission, in cooperation with the Secretary, shall ensure that any relevant information, other than trade secrets and other proprietary information otherwise exempted from mandatory disclosure under any other provision of law, obtained from the conduct of each of the remedial actions authorized by this subchapter and the subsequent perpetual care of those residual radioactive materials is documented systematically, and made publicly available conveniently for use.

The Final EIS should include in its discussion of the White Mesa alternative the applicable references to the 2003 Preliminary Cost Estimate and Technical Report and other IUSA documents, with “explicit reference by footnote,” as required by 40 C.F.R. § 1502.24.

Response:

The IUC report mentioned in the comment was placed in the reading rooms after proprietary information was deleted. Because DOE performed its own independent evaluation of the White Mesa Mill alternative, the IUC report was not used as a reference and, therefore, was not included in the list of references.

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Document #706 Comment #51 Commentor: Fields, Sarah

The DEIS sheds little light on the process that resulted in the White Mesa proposal appearing as a viable remedial action alternative.

Response:

The EIS identifies the White Mesa Mill alternative as a reasonable alternative under NEPA that could meet the requirements of 40 CFR 192. It is considered a reasonable alternative for three main reasons: it is technically feasible; it could provide the benefit of co-location of uranium mill tailings wastes; and the associated impacts may have the potential to be mitigated in an acceptable manner.

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Document #706 Comment #52 Commentor: Fields, Sarah

It is unclear whether IUSA is acting as an applicant or as a potential future contractor to the DOE, and how, specifically, the IUSA proposal fits into the regulatory scheme of things under UMTRCA and other applicable DOE regulations related to applicants and contractors. This aspect of the IUSA proposal should be outlined in the DEIS, rather than hidden from the public.

Response:

The proposal to which the commentor refers was submitted in response to a public solicitation from DOE for proposals on disposal options as part of a preliminary scoping effort to assist the DOE in identifying the range of reasonable alternatives. Final decisions on the contractual mechanisms that would be applied to the White Mesa Mill alternative would be determined as part of DOE's final decision-making process if this alternative were selected.

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Document #706 Comment #53 Commentor: Fields, Sarah

The DEQ NEPA regulations include provisions that apply to “applicants,” which IUSA appears to be. IUSA did submit a substantive proposal to the DOE and that proposal was accompanied by environmental information: Description of the Affected Environment, White Mesa Mill, Blanding, Utah, for Transport by Slurry Pipeline and Disposal of the Moab Tailings, May 2003.

40 C.F.R. § 1506.5 (Agency responsibility), states at (a):

(a) Information. If an agency requires an applicant to submit environmental information for possible use by the agency in preparing an environmental impact statement, then the agency should assist the applicant by outlining the types of information required. The agency shall independently evaluate the information submitted and shall be responsible for its accuracy. If the agency chooses to use the information submitted by the applicant in the environmental impact statement, either directly or by reference, then the names of the persons responsible for the independent evaluation shall be included in the list of preparers (Sec. 1502.17). It is the intent of this paragraph that acceptable work not be redone, but that it be verified by the agency.

There is no specific reference to this requirement in the DEIS. The DOE did use the information submitted by IUSA in the DEIS and, however vaguely, did reference that document. However, there is no indication that the DOE independently evaluated and verified the information in that IUSA submittal. The DEIS does not indicate that the DOE is responsible for its accuracy. The DEIS does not list the preparers of the Description of the Affected Environment in the list of DEIS preparers in Section 8 of the DEIS.

The status of IUSA as an “applicant,” the relationship of the IUSA environmental report to the DEIS, and the applicability of the requirements of 40 C.F.R. § 1506.5(a) should be clarified by the DOE.

Response:

IUC’s proposal was placed in the reading rooms after proprietary information was deleted. Because DOE performed its own independent evaluation of the White Mesa Mill alternative, the IUC report was not used as a reference and, therefore, was not included in the list of references. As the issuing agency for the EIS, DOE is responsible for the accuracy of its contents. Preparers of the EIS are listed in Chapter 8.0.

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Document #706 Comment #54 Commentor: Fields, Sarah

Section 2 of the DEIS is supposed to contain a Description of Proposed Alternative Action. However, there is not a full description of any of the off-site disposal alternatives. The description of those alternatives is scattered throughout this section.

Information regarding the White Mesa slurry pipeline alternative is presented on pages 2–34, 2–46, 2–56, 2–59, 2–61 to 2–66, 2–78 to 2–83, and then some. It is very hard for a reviewer of the DEIS to get a complete, comprehensive picture of the totality of the White Mesa alternative or the two other off-site disposal alternatives.

The DEIS should be rearranged to include a descriptive section for each off-site alternative in Section 2. All this descriptive information for each alternative should be in one place. Section 2 is very confusing.

Response:

DOE recognizes that the combination of four disposal site alternatives, three transportation modes, active ground water remediation, and the No Action alternative makes this EIS complex. DOE decided that the format developed for the EIS is the most effective means to communicate these proposed actions.

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Document #706 Comment #55 Commentor: Fields, Sarah

Section 1.4.2 (page 1–8) introduces the White Mesa proposal. It states that the Mill has the potential to process material from the Moab site.” Neither here, nor in subsequent DEIS discussion of the possibility of the processing of slurry water or tailings, is there any mention of necessary findings by the Secretary of Energy that are required prior to the processing of any Moab materials at White Mesa. The specific provisions set forth in UMTRCA related to such processing are not included in the DEIS discussion. Here the applicable statute is found at 42 U.S.C. Sec. 7918(b), which states:

(b) Mineral concentration evaluation; terms and conditions for mineral recovery; payment of Federal and State share of net profits; recovery costs; licenses

Prior to undertaking any remedial action at a designated site pursuant to this subchapter, the Secretary shall request expressions of interest from private parties regarding the remilling of the residual radioactive materials and the site and, upon receipt of any expression of interest, the Secretary shall evaluate among other things the mineral concentration of the residual radioactive materials at each designated processing site to determine whether, as a part of any remedial action program, recovery of such minerals is practicable. The Secretary, with the concurrence of the Commission, may permit the recovery of such minerals, under such terms and conditions as he may prescribe to carry out the purposes of this subchapter. No such recovery shall be permitted unless such recovery is consistent with remedial action. Any person permitted by the Secretary to recover such mineral shall pay to the Secretary a share of the net profits derived from such recovery, as determined by the Secretary. Such share shall not exceed the total amount paid by the Secretary for carrying out remedial action at such designated site. After payment of such

Document #706 Comment #55 - continued

share to the United States under this subsection, such person shall pay to the State in which the residual radioactive materials are located a share of the net profits derived from such recovery, as determined by the Secretary. **The person recovering such minerals shall bear all costs of such recovery.** Any person carrying out mineral recovery activities under this paragraph shall be required to obtain any necessary license under the Atomic Energy Act of 1954 [42 U.S.C. 2011 et seq.] or under State law as permitted under section 274 of such Act [42 U.S.C. 2021]. [Emphasis added.]

This statute related to recovery of minerals from “residual radioactive material” by a Title II licensee requires various findings by the Secretary of Energy.

There is no indication that the Secretary has made the required findings related the processing of Moab tailings or slurry water by IUSA. There is no indication that the Secretary has evaluated the mineral concentration of the residual radioactive materials at the Moab site, determined whether mineral recovery is practicable and consistent with remedial action, or has determined the share of the net profits that should to the Secretary.

The DEIS’s failure to include this pertinent information is consistent with the DEIS’s failure, described above, to include specific information regarding the implementation of applicable statute, as required.

Response:

In 2002, DOE solicited ideas on the Moab remediation through the issuance of a Federal Business Opportunities announcement. The announcement met the requirement for soliciting reprocessing interest. No party responding to the announcement expressed an interest in reprocessing. Further, in the early days of the UMTRA Title I surface remedial action project, DOE made public an expression of interest from private parties regarding the remilling of the residual radioactive materials, and no action was taken on the request to reprocess the tailings at the 24 sites. DOE has recently reviewed the economic viability of reprocessing the tailings; the calculation results conclude that reprocessing is not economically viable using conventional milling technology.

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Document #706 Comment #56 Commentor: Fields, Sarah

Section 3.4.11 (pages 3–155 to 3–157) discusses Cultural Resources at the IUSA Mill.

The discussion of the adverse impacts to the cultural resources in Section 4.4.9 (pages 4–135 to 4–138) reference the 2003 Class I Cultural Resource Inventory of the Proposed White Mesa Mill Site, White Mesa Mill Materials Borrow Area, and Two Associated Corridor Routes, Grand and San Juan Counties, Utah, Abajo Archeology, Bluff, Utah. There is no mention in the DEIS that this document is not publicly available. Apparently, no attempt was made to make a copy that did not contain sensitive information available to the public. 40 C.F.R. § 1502.21 states, “No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment.”

Document #706 Comment #56 - continued

Section 3.4.11 states that the various sections of land on White Mesa, however there is no mention of Section 16, Township 38 South, Range 22 East. Since this section contains IUSA's proposed borrow area, I would think that that area would be included in the study.

The information in this discussion of cultural resources is minimal and in no manner informs the reader of the types of cultural sites that would be destroyed should the White Mesa alternative be approved. The DEIS should include pictures of the types or archeological sites that would be destroyed. Attached is a publication that includes pictures. This document is available at <http://www.utah.sierraclub.org/>. As the author of that document, I give the DOE permission to make use of any pictures or text from that document. Please! Download, cut, and paste.

The DEIS references a document, still in the works, by J. Fritz, Potential Traditional Cultural Properties within Moab Project Study Areas: A Preliminary Ethnographic Overview. Information from this study should be included in the final DEIS. Additionally, during the scoping process, much information was provided the DOE regarding the traditional uses of cultural resources in the vicinity of White Mesa. This information has not been included in the DEIS. It must be incorporated in the DEIS.

The DEIS fails to acknowledge that "mitigation measures" usually means the complete destruction of the archeological resources on the ground, after excavation.

This DEIS discussion does not include any reference to the license condition in IUSA's license (License Condition 9.7, NRC Source Material License SUA-1358) related to the identification and mitigation of archeological sites. The terms of this license condition should be included in the DEIS, as required by CEQ NEPA regulations at 40 C.F.R. §1502.25(b).

Response:

Section 304 of the National Historic Preservation Act allows federal agencies to withhold sensitive information relating to the location or character of cultural resources from the public, including the information in the Class I inventories and the Preliminary Traditional Cultural Property report prepared for this project. It would be a disservice to tribal members and other people who care about these sites if their locations were made known to the general public. DOE has shared this sensitive information with the appropriate tribal representatives. By withholding this information from the public, DOE is protecting the integrity of archaeological, historic, and sacred sites. The EIS includes enough information from the Class I inventories and Preliminary Traditional Cultural Property report to analyze and compare the various alternatives. The results of the analysis indicate that the White Mesa Mill (slurry pipeline) alternative would, by far, have the most adverse effects on cultural resources.

Cultural resources located on and near the Section 16 borrow area are discussed in Section 3.5.10, and impacts to these resources are described in Section 4.5.

Document #706 Comment #56 - response continued

The EIS describes potential mitigation measures for cultural sites in Sections 4.1.9.1, 4.2.9.2, 4.3.9.2, 4.4.9.2, and 4.4.9.3. In general, mitigation might include (1) avoiding the cultural resource sites, (2) monitoring cultural resource sites during surface-disturbing activity, (3) excavating and recording cultural resource data before construction activities began, and (4) moving cultural resource objects from areas of disturbance to nearby undisturbed areas.

The EIS does not reference IUC's license (License Condition 9.7, NRC Source Material License SUA-1358) because cultural resource mitigation for the Moab Project would be determined by a new Memorandum of Agreement between the Utah SHPO, DOE, IUC, the Ute Mountain Ute Tribe, and other affected parties if the White Mesa Mill alternative were selected. However, because of the comments received by the public and cooperating agencies and results of analyses provided in the EIS (including consideration of the consequences of the uncertainties characterized in the EIS), DOE has identified off-site disposal at the Crescent Junction site using rail transportation and active ground water remediation as its preferred alternatives for the remediation of the Moab mill tailings, vicinity properties, and contaminated ground water. DOE will continue to consider these comments in its final decision-making.

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Document #706 Comment #57 Commentor: Fields, Sarah

It is clear that the numerous adverse impacts to significant, treasured, culturally meaningful resources on and in the vicinity of White Mesa, which cannot in any manner be mitigated, make consideration of the White Mesa option completely unacceptable.

Response:

See response to comment #56.

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Document #707 Comment #1 Commentor: Fields, Sarah M.

I. IUSA Operations

The activities at the Moab Mill are currently under the supervision and direction of the Department of Energy (DOE) pursuant to Title I of UMTRCA.

IUSA's proposal contains three major operations: 1) a slurry preparation plant at the Moab Mill, 2) slurry and recycle pipelines between the preparation plant and the IUSA Mill at White Mesa, and 3) the disposal site at White Mesa. Currently the IUSA mill is operated under a 10 C.F.R. Part 40 source material license pursuant to Title II of UMTRCA.

IUSA proposal states that the slurry preparation plant will be under IUSA's supervision and direction. The pipelines will also be under their control and direction. It appears that IUSA would own both operations.

QUESTIONS:

1. Since IUSA believes that they would control and operate the slurry preparation plant and the materials that enter that plant at the Moab Mill will, at that point, become the property of IUSA, under what regulatory regime would IUSA operate that slurry preparation plant?
2. Would that slurry plant become part of IUSA's Title II licensed activities? If so, is the DOE authorized to have a Title II operation at a Title I facility?
3. Would IUSA operate the slurry preparation plant as a contractor to the DOE? If so, would the DOE have oversight responsibility for that Moab Mill operation?
4. Would the pipelines become part of IUSA's licensed activities? If not, which State or Federal agency or agencies would have oversight over the construction and operation of the pipeline. Which statutes and regulations apply?
5. If IUSA takes ownership of the tailings at the Moab site and their slurry operation and/or pipelines are part of their uranium mill facility operation, where in statute and NRC or State of Utah regulations is this authorized? What Part 40 regulations, guidances, manuals, etc., apply to this type of operation?
6. I may have missed some questions. Basically, I would like to know what statutes and regulations would apply and how they would be applied to the slurry preparation and pipeline facilities and operations if the IUSA proposal is approved.

Response:

1. As stated in Section 2.2.5.2, IUC would take ownership of the tailings slurry at the entrance to the slurry pipeline system at the Moab site under the regulatory authority of the State of Utah.
2. The slurry plant at the Moab site would be DOE's responsibility. The drying plant at the White Mesa Mill would be IUC's responsibility. There would be no Title I actions at IUC's Title II facility.

Document #707 Comment #1 - response continued

3. If, in the Record of Decision, DOE decided to transport the tailings to White Mesa Mill by pipeline, the operator of the on-site slurry plant would then be selected. DOE would oversee any selected contractor.

4. See response to comment #1.

5. The provisions of both federal and state statutes allow the evaluation of alternative feed stocks.

6. As stated in the EIS (Section 2.2.5.2), the State of Utah's regulations would apply to IUC's operations.

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Document #707 Comment #2 Commentor: Fields, Sarah M.

II. Rights of Way

The fact that it is doubtful that IUSA would be able to get a right of way over the Matheson Wetlands Preserve would seem to be something that would preclude the implementation of IUSA's proposed project. Yet, many FTE's and funds have been spent on considering a proposal that would be moot because the required rights of way are likely not available to this private entity.

I do not understand why this basic issue has not been brought up and settled. IUSA seems to think that a non-publicly available memo from a law office suffices as a reasonable assurance that there is no problem with rights of way.

QUESTION:

1. Why has the DOE gone ahead with consideration of the the IUSA proposal when it it quite possible that IUSA will not be able to obtain the required rights of way?

2. Why has the DOE not even bothered to inquire of the various owners or responsible parties for the land that IUSA would have to cross with a pipeline in order to determine whether any right-of-way difficulties might arise that would block IUSA's proposed project?

3. If the IUSA Mill alternative is chosen as the preferred alternative, is the DOE authorized or prepared in any way to exert federal authority in order to obtain the required rights of way on behalf of IUSA?

The DEIS sheds no light on these legal and regulatory authority questions.

Thank you for your attention to these matters. If you are unable to answer these questions with authority, please refer them to the appropriate persons.

Document #707 Comment #2 - continued

Response:

Both federal and state regulations have provisions to facilitate the installation and use of pipelines, power lines, highways, and other infrastructure components that serve local, regional, and national needs. Because most of the pipeline route to the White Mesa Mill would parallel existing pipeline routes, it is clear that access to public and private lands has been obtained in this region in the past, and therefore, for the purpose of evaluating alternatives in the EIS, it is clear that a pipeline is a reasonable alternative. However, the potential difficulty in obtaining access is recognized.

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**Document #1368 Comment #1 Commentor: Davenport, James H.—Colorado River
Commission of Nevada**

The integrity of the Colorado River water resource is vitally important to the more than 20 million people in the Lower Colorado River Basin states of Arizona, Nevada, and California, including the growing populations of Southern Nevada who rely on the River as the major source of their water supply. Protection of this important natural resource requires that the Moab uranium mill tailings site be cleaned up in a manner that provides absolute, long-term protection for the Colorado River.

Response:

DOE recognizes the vital importance of the Colorado River water resource to the populations of the Lower Colorado Basin states. The Department is confident that any of the proposed action alternatives analyzed in the EIS would provide long-term protection for the river. However, because of the uncertainties described in Section 2.6.3 of the EIS, DOE does not believe that any remedy can guarantee absolute, long-term protection. DOE recognizes that long-term uncertainties are greater under on-site disposal than under off-site disposal and will consider the relative uncertainties in its final decision-making.

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Document #1368 Comment #2 Commentor: Davenport, James H.

There are numerous factors related to Colorado River water resource protection that warrant relocation of the tailings pile to a safer and more secure location. These include (without limitation): the potential for catastrophic discharge due to impoundment failure resulting from natural subsidence and periodic inundation by the Colorado River (portions of the tailings impoundment are located within the 100- and 500-year floodplains); the potential for the Colorado River to migrate and de-stabilize the pile; and the potential for continued, long-term discharge of elevated contaminant concentrations from groundwater emanating from beneath the pile.

Response:

In its analyses, DOE has considered each of the factors cited in the comment (see Sections 4.1.3, 4.1.4, and 4.1.17). DOE has also considered the consequences of the uncertainties characterized in the EIS and the comments received on the draft EIS. Based on these considerations, DOE has identified off-site disposal at the Crescent Junction site using rail transportation and active ground water remediation as its preferred alternatives for the remediation of the Moab mill tailings, vicinity properties, and contaminated ground water. The Department will continue to consider this comment and others as it finalizes its decision.

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Document #1368 Comment #3 Commentor: Davenport, James H.

Among the alternatives proposed and discussed in the DEIS, the only alternative which accomplishes this resource protection objective is Off-Site Disposal. Among the Off-Site Disposal alternatives, the best off-site disposal location appears to be Klondike Flats utilizing rail transportation.

Response:

DOE has identified off-site disposal at the Crescent Junction site using rail transportation as its preferred surface remediation alternative. The basis for DOE's identification of this preferred alternative is provided in Section 1.4.

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Document #1368 Comment #4 Commentor: Davenport, James H.

The Klondike Flats location is sufficiently distant (18 miles) from the Colorado River to preclude tailings pile-riparian conflict. The dry-material handling approach, enabling mixing, surface transportation, and even distribution and compaction of spoils at the new disposal site, is capable of being interrupted in the event operational problems arise. The new disposal site is capable of being designed with maximum security and safety in mind. The rail transportation approach, using sidings already constructed and serving both the Moab and Klondike Flats sites, permits separation of transportation of spoils from transportation on U.S. 191 by the general public. The Klondike Flats location does not implicate interstate traffic on I-70, as would the Crescent Junction site.

Response:

The EIS is consistent with the commentor's assessment of the physical attributes of the Klondike Flats site as presented in Section 3.2. Operational problems could occur under all the action alternatives, although the potential for such problems would be less under the on-site disposal alternative because fewer operations would be required. Similarly, the EIS is consistent with the commentor's assessment of the transportation issues as described in Section 4.2.

As noted in the response to comment #2, DOE has identified off-site disposal at Crescent Junction using rail as its preferred surface remediation alternative. Further discussion of the basis for DOE's identification of its preferred alternatives is provided in Section 1.4.

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Document #1368 Comment #5 Commentor: Davenport, James H.

The Colorado River serves not only as a critical water supply for the Southwest, but as a paramount ecological resource as well. According to the DEIS the primary contaminant of concern with respect to water quality and impacts to the Colorado River is ammonia, specifically, its high concentrations and corresponding toxicity to aquatic organisms. Federally listed species that could potentially be adversely affected by ammonia and other contaminants include the endangered Colorado pikeminnow, razorback sucker, humpback chub, and bonytail.

Response:

The comment accurately reflects the characterization of the environment included in the EIS. Additionally, Appendix A includes the Biological Assessment and Biological Opinion, which considers all the federally listed endangered species and addresses potential impacts from ground water contamination at the Moab site.

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Document #1368 Comment #6 Commentor: Davenport, James H.

The CRC, other participating Nevada agencies, agencies from Arizona and California, and the U.S. Bureau of Reclamation have initiated a long term, comprehensive initiative to recover endangered species and protect wildlife habitat on the Colorado River from Lake Mead to the U.S.-Mexico border. The Lower Colorado River Multi-Species Conservation Program (MSCP) is a 50-year initiative designed to create more than 8,100 acres of riparian, marsh and backwater habitat for 31 covered species at a cost of more than \$620 million, included in the list of MSCP-covered species are the razorback sucker, humpback chub, and bonytail, three of the four endangered species listed above. Ongoing discharge of contaminated groundwater, emanating from beneath the Moab uranium mill tailings pile, to the Colorado River is presumably deleterious to them. The Department of Energy should choose an alternative that endorses and enhances the actions of Lower Colorado River Basin states and the Bureau of Reclamation, that complements the strategy of the MSCP and ensures the protection of sensitive, threatened, and endangered species of fish, wildlife, and their habitat, rather than one that operates contrary to those actions.

Response:

As described in the EIS, under the current pre-remediation conditions, site-derived contamination cannot be detected above background levels a few hundred meters downstream. Based on the analyses documented in the EIS, DOE is confident that implementation of any of the action alternatives would provide long-term protection of human health and the environment. See also response to comment #4.

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Document #1396 Comment #1 Commentor: Feinstein, Dianne—U.S. Senate

I am writing to urge the Department of Energy to adopt an off site remediation plan for the uranium mill tailings pile at the site near Moab, Utah. The Moab site lies adjacent to the Colorado River, which serves as a water resource for the citizens of Utah, Nevada, Arizona, and California.

The Draft Environmental Impact Statement (EIS) the Department of Energy released last November identified the environmental impacts of two primary remediation alternatives: one that would cap the tailings pile on site and one that involves off-site disposal. The Department did not, however, identify a preferred alternative as part of the Draft EIS. I wish to bring to your attention several of the reasons why the on-site alternative will not provide a long-term solution to this problem.

In response to the Draft EIS, the Environmental Protection Agency (EPA) indicated that because the on-site remediation alternative does not involve use of a liner underneath the disposal pile, contaminants from the tailings pile, including uranium and ammonia, will continue to seep into the groundwater and into the river. The EPA also pointed out that the eventual deterioration of the salt-beds underlying the disposal site will result in subsidence in the area of the site, compromising the integrity of the proposed cap and leading to radon releases and water infiltration through the pile.

The location of the Moab site within the 100-year floodplain for the Colorado River presents an increased risk of reintroducing contaminants into the groundwater and surface waters should heavy flooding occur. A recently released study by the U.S. Geological Survey indicated that part of the pile would be inundated by up to 25 feet of water during the flooding associated with 100-year to 500-year storms.

It is clear to me that the on-site alternative presents the possibility for significant adverse impacts on the Colorado River in the event of flooding or river migration, natural subsidence, or disposal cell failure. Because of the potential for prolonged environmental and public health risks associated with continued release of toxic contaminants into ground and surface waters, off-site disposal is the only option that offers a long-term solution.

I greatly appreciate your attention to this issue. It is my hope that the Department of Energy will move forward with a final remediation plan for the Moab site that includes off-site disposal of the uranium mill tailings and a comprehensive groundwater remediation strategy that provides long-term protection of the local citizens, and almost 25 million Americans who use the Colorado River water downstream.

Response:

As stated in the draft EIS, DOE intended to consider the analyses provided by the draft EIS along with public and agency comments before identifying a preferred alternative. The analyses in the EIS acknowledge the continuing contribution that an on-site disposal cell would make to ground water contamination, however, that contamination would only add 5 years to the projected ground water remediation program. The EIS also acknowledges subsidence of the Moab valley and projects that an on-site disposal cell would come into contact with the ground water in 7,000 to 10,000 years, which while a concern to DOE is beyond the required regulatory performance period of 200 to 1,000 years. DOE also determined that river migration is not likely within the

Document #1396 Comment #1 - response continued

regulatory performance period, however, additional mitigation measures are included in the on-site disposal cell design that would further reduce the already low probability of river migration. The EIS also assesses the impacts from expected period inundation of an on-site disposal cell and determined that such events would not release contaminants at concentrations above aquatic standards.

As noted in the EIS, Section 2.6, there are uncertainties associated with many of the analyses in the EIS related to long-term performance. For these reasons, in the final EIS, DOE has identified off-site disposal at the Crescent Junction site using rail transportation and active ground water remediation as its preferred alternatives for the remediation of the Moab mill tailings, vicinity properties, and contaminated ground water. DOE is confident that these alternatives would provide long-term protection of the environment, both locally and downstream, if they are selected in the Record of Decision. Further discussion of the basis for DOE's identification of the preferred alternatives is provided in Section 1.4.

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**Document #1398 Comment #1 Commentor: Smith, Darrell H.—Salt Lake County
Council of Governments**

Dear Governor Huntsman:

At our Council of Governments meeting held March 3, 2005, COG members briefly discussed the studies currently underway to identify the best alternative for managing the 12 million tons of radioactive waste located next to the Colorado River near Moab. They were reminded of a site visit to the Moab area several of them participated in on October 2, 1998. The purpose of the visit was to receive a briefing on management problems involving the National Parks and other recreational facilities located nearby. The invitation for the visit was extended by Mr. Walt Dabney, Superintendent at that time for the Southeast Utah National Parks and Monuments group. Mr. Dabney realized that a large percentage of his visitors were residents of the Wasatch Front. He wanted the local elected officials from the Salt Lake County area who represented many of the urban visitors to understand the concerns he was dealing with.

One of the concerns identified by parks management was the Atlas Mineral Corporation tailing pile, sitting like a time bomb near the banks of the Colorado River. Our delegation stood on the road next to the tailings pile and observed where a portion of the tailings had already drained toward the River. Noting the devastated vegetation in the drain fields, COG members unanimously agreed that this toxic material should be moved. Given the fragility of the desert lands that make up so much of Utah, we agree with the notion that it is not a question of if the tailings will be washed into the Colorado River, but when. We support the removal of the tailings to a more appropriate site.

While moving the tailings will cost more in the short run, it does represent the most permanent and environmentally sound management alternative. The Colorado River plays such a vital role in the West as to render any alternative plan for onsite storage unacceptable. We cannot leave the lower Colorado River system at risk.

We appreciate your strong support of the removal option. We may have missed the deadlines for formal comment on the draft Environmental Impact Statement. We would appreciate it, therefore, if you would forward our views to the United States Department of Energy officials responsible for developing the Altas Tailing management plan in any of your subsequent communications.

Response:

Table 2–33 in the EIS addresses the potential for river migration and the potential for catastrophic floods, regardless of the cause of the flood, and the consequences of these events should they occur. Section 4.1.17 discusses the potential natural processes that could cause a failure of the disposal cell at the Moab site and the expected consequences and potential risks. Further, in the final EIS, DOE has identified off-site disposal at the Crescent Junction site using rail transportation and active ground water remediation as its preferred alternatives for the remediation of the Moab mill tailings, vicinity properties, and contaminated ground water. DOE is confident that these alternatives would provide long-term protection of the environment, both locally and downstream, if they are selected in the Record of Decision. Further discussion of the basis for DOE’s identification of the preferred alternatives is provided in Section 1.4 of the EIS.

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Document #1400 Comment #1 Commentor: Zimmerman, Gerald R.—Colorado River Board of California

Moving the Moab Tailings Pile Off-Site

The CRB in its letter of June 22, 1999, to the Nuclear Regulatory Commission concluded that on-site capping of the mill tailings raised serious concerns due to the site's location adjacent to the Colorado River, and that the prudent and environmentally sound method of dealing with this problem would be to remove the tailings to another site. The CRB continues to hold that position. Please refer to the enclosed letter.

Also, one of the CRB's member agencies, The Metropolitan Water District of Southern California (MWD), in its letter dated February 17th to your agency, strongly believes that moving the Moab pile off-site is the only reliable and permanent alternative sufficient to protect the Colorado River from further contamination by radioactivity, organics, and inorganics; i.e. radium-226, ammonia and the total dissolved solid (TDS), etc.

Response:

DOE believes that either on-site or off-site disposal would meet the performance requirements of 40 CFR 192 and would be protective of human health and the environment. DOE will consider this comment in its final decision-making.

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Document #1400 Comment #2 Commentor: Zimmerman, Gerald R.

Additionally, the CRB concurs with the State of Utah's December 29, 2004, and February 15, 2005, letters to the DOE, which state that any remediation other than an off-site option is unacceptable (copies enclosed). With both the no action and the on-site alternatives, contaminated seepage will continue to leak from the tailings pile and into the Colorado River. Also, as pointed out by MWD there are potential adverse impacts to the Colorado River from both the no action alternative and the on-site alternative through natural subsidence, river migration, flooding, incision, and disposal cell or tailings pile failure.

The CRB strongly supports the off-site disposal option, as this is the prudent option, which offers long-term, permanent protection to the quality of water received by downstream Colorado River users. With both the no action and the on-site alternatives, contaminated seepage will continue to leak from the tailings pile and into the Colorado River, which is not acceptable.

Response:

The impacts that would result from natural subsidence, river migration, flooding, incision, and disposal cell or tailings pile failure under the on-site alternative are detailed in Section 4.1 of the EIS. DOE will consider these impacts and others, along with the comments received on the draft EIS, in its final decision-making.

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Document #1400 Comment #3 Commentor: Zimmerman, Gerald R.

Groundwater Remediation

DOE has not identified a preferred option yet; however, Groundwater Extraction and Disposal are main components of the Groundwater Remediation proposal, which are addressed below.

Groundwater Extraction

In Section 2.3.2.1, two methods for extracting contaminated groundwater, i.e., “extraction wells” and “interception trenches” are mentioned. For the extraction wells method, 50 to 150 wells to depths of up to 50 feet would be installed. For the shallow trenches option, up to 2,000 lineal feet of trenches would be constructed to intercept shallow groundwater (the depth of the shallow trenches is not mentioned in the DEIS). It is indicated in the report that with both methods approximately 150 gallons per minute (gpm) of contaminated water would be extracted.

The CRB’s concern is that it is not conclusive whether any of these methods would capture all of the contaminated groundwater, that otherwise would reach the Colorado River. In Section 3.1.6.1 of the DEIS, it is mentioned that “site-related groundwater contamination occurs in the unconsolidated basin-fill aquifer in the upper hydrologic system.” Also, in Section 3.1.6.2, it is reported that the “average saturated thickness of the gravelly sand that constitutes the unconsolidated basin-fill aquifer is approximately 70 feet.” It is not clear whether a number of 50-foot deep wells or the trenches would capture the water in the 70-foot deep saturated aquifer and whether the 150 gpm extracted from these extraction wells or trenches is equal to or greater than the amount of groundwater flow to the Colorado River.

The CRB suggests that the following questions be addressed in the final EIS:

- The mechanism that would guarantee that the 50-foot deep wells would capture all of the contaminated groundwater.
- The same question is asked regarding the trenches option in light of the fact that the depth of the trenches is not indicated in the DEIS.
- Indicate the amount of contaminated groundwater that reaches the Colorado River. This should be compared with the amount of water that would be extracted.

Response:

Based on the analyses in the EIS and numerous other factors, DOE has identified active ground water remediation as its preferred alternative for addressing ground water contamination. The proposed ground water remediation system does not need to guarantee that the wells would capture all of the contaminated ground water. Ground water concentrations need to be reduced to the goal of approximately 3 mg/L ammonia to be protective in the surface waters.

Document #1400 Comment #3 - response continued

DOE has already undertaken interim actions at the Moab site to reduce contaminant migration. These actions include capturing and evaporating some of the most contaminated ground water from the legacy plume that is entering the Colorado River and reducing the contaminant seepage from the pile area that has the potential to migrate into the ground water beneath the pile. These interim actions have proven to be very effective in significantly reducing the total mass of contaminants reaching the river. On the basis of computer simulations of ground water movement and contaminant transport, DOE believes that river water quality protective of aquatic species can be permanently achieved in 75 to 80 years, regardless of the surface remedial action selected. The final design of the ground water system would be developed in a remedial action plan after DOE issues its Record of Decision.

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Document #1400 Comment #4 Commentor: Zimmerman, Gerald R.

Groundwater Disposal

In Section 2.3.2.1 of the DEIS, three methods of disposal of the extracted and treated groundwater are offered. These disposal options are: “discharge to surface water”, “shallow injection” and “deep well injection.” Although the “deep well injection” may provide more of a safety factor; there may be some restrictions and obstacles that would prohibit implementing this option, such as the rate that water can be continuously injected into the deep aquifer. Have those been identified and evaluated?

Response:

The final determination of the most appropriate technologies and methods for ground water treatment would require a more detailed characterization and engineering analysis. As stated in the EIS (Section 2.3.2), additional testing, characterization, or pilot studies may be required before the optimum system could be selected and designed. Final design would occur after the Record of Decision is issued.

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Document #1400 Comment #5 Commentor: Zimmerman, Gerald R.

Colorado River Basin Salinity Control Forum Policies

The alternative selected should at least meet all Colorado River Basin Salinity Control Forum (Forum) policies. The “Policy for Implementation of Colorado River Salinity Standards Through the NPDES Permit Program for Intercepted Groundwater” states that the discharge of intercepted groundwater into the Colorado River needs to be evaluated in a manner consistent with the overall objective of “no-salt” return whenever practical. The no-salt discharge requirement may be waived at the option of the permitting authority in those cases in which the discharge salt load reaching the main stem of the Colorado River is less than one ton per day or 350 tons per year, whichever is less. The water currently migrating from the bottom of the tailings pile has a composition of approximately 24,600 mg/L TDS and a flow rate of 20 gallons per minute. This data indicates that the TDS loading to the Colorado River under the no action alternative is 2.9 tons/day and the TDS loading to the Colorado River will remain above the threshold of one ton per day for the next 20 years under the no action alternative. If water is extracted and returned to the Colorado River, the Colorado River Basin Salinity Control Forum’s “Policy for Implementation of Colorado River Salinity Standards Through the NPDES Permit Program” should be met.

Response:

DOE’s preferred alternative for addressing ground water contamination is active ground water remediation, which would intercept and dispose of contaminated ground water before it reached the river. As stated in the EIS (Section 2.3.2), if discharge to the river were considered a viable alternative for dealing with treatment effluent, appropriate permits would need to be obtained from the state, and compliance with conditions such as discharge rates and effluent composition would be required.

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Document #1404 Comment #1 Commentor: Fields, Sarah M.

The U.S. Department of Energy (DOE) has included the Floodplain and Wetlands Assessment for Remedial Action at the Moab Site in the DEIS, pursuant to DOE requirements at 10 CFR Part 1022, Executive Order 11988, Floodplain Management, and Executive Order 11990, Protection of Wetlands. DEIS, Volume II, Appendix F (pages F-1 to F-18). As will be shown below, the DOE has failed to implement these regulatory and Executive Order requirements.

Section F1. Introduction (page F-1). In this section, the Assessment fails to inform the public that if the DOE determines that “that no practicable alternative to locating or conducting the action in the floodplain or wetland is available,” then the DOE must issue a floodplain statement of findings, pursuant to 10 C.F.R. § 1022.14 (Findings). In other words, if the DOE determines that there is no practicable alternative to disposing of the tailings on-site, then a statement of findings must be issued for that action. Similar findings would be required for a decision to slurry or truck the tailings to White Mesa, due to the adverse impacts on the Scott M. Matheson Wetlands Preserve (Matheson Wetlands) and other waterways and wetlands from that alternative.

Further, in accordance with Section 1022.14(e), if the “proposed floodplain actions that may result in effects of national concern, DOE shall publish the floodplain statement of findings in the Federal Register.” Section 1022.4 defines “effects of national concern” as “those effects that because of the high quality or function of the affected resource or because of the wide geographic range of effects could create concern beyond the locale or region of the proposed action.” The Assessment must include a discussion of all the requirements related to a statement of findings.

Response:

DOE has complied with all the regulatory requirements in 10 CFR 1022 and Executive Orders 11988 and 11990 in its assessment of impacts to floodplains and wetlands. In the regulations, the phrase “no practicable alternative” was intended to address the physical location of activities within floodplains and wetlands. For example, the guidance would mandate that construction of a building could occur in a floodplain only if no other possible place for the building (“no practicable alternative”) exists. Because contaminated materials lie in the floodplain at the Moab site, there is “no practicable alternative” to activities within the floodplain under any of the proposed remediation alternatives. The Floodplain and Wetlands Assessment (Appendix F) was prepared in accordance with Section 1022.13. Because a Statement of Findings should not be issued until after comments on a floodplain/wetlands assessment are incorporated and alternatives are considered, DOE did not include a Statement of Findings in the draft EIS; however, it is included in this final EIS. DOE will comply with the notification requirements by referencing the Statement of Findings in the Notice of Availability for the final EIS. The Department also will include the Statement of Findings in the Record of Decision, which will be published in the Federal Register in accordance with CEQ regulations.

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Document #1404 Comment #2 Commentor: Fields, Sarah M.

Section F2.1 (Proposed Actions at the Moab Site—On-Site Disposal Alternative), at F2.1.1 (Remediation of Contaminated Materials) (page F-4). This section discusses the removal of “surface contamination” from the top layer” and removal of tamarisk.

There is no discussion of the depth of the “top layer” or the extent of surface and subsurface contamination on the balance of site (i.e., outside the tailings pile footprint).

The Assessment must include a map of the areas of contaminated materials that the DOE expects to excavate, including depth of materials, and areas that would need to be filled in with clean materials.

This section fails to mention the fact that the balance of contaminated site materials will be placed on the impoundment for de-watering purposes prior to placement of the final cover. The Assessment fails to address the future adverse impacts of the placement of that material on the amount of contaminants in the floodplain over time.

This section (and related sections in the DEIS) fails to acknowledge the presence of a 6.6-acre area at the southeast toe of the impoundment where the highest contamination is at moderate depth (below 30 cm). The area of contamination extends 200 feet from the toe of the tailings impoundment, encompassing an area approximately 1,500 long. The estimated volume of the contaminated material, which may have come from an old tailings’ spill, is 25,000 cubic yards. See letter from Richard E. Blubaugh, Atlas Minerals, to Harry J. Pettengill, Uranium Recovery Field Office, Nuclear Regulatory Commission (NRC), June 29, 1987 (NRC Accession No. 8708050343), with enclosed “Evaluation of Southeast Area, Atlas—Moab Mill Facility,” with eleven oversized drawings, EnecoTech Inc., June 30, 1987.

Please correct these oversights.

Response:

The section cited in the comment (F2.1) is a high-level summary of proposed actions at the Moab site under the on-site disposal alternative within the context of the floodplain and wetlands assessment appendix. It does not attempt to incorporate or repeat all the information regarding the proposed actions (Chapter 2.0), affected environment (Chapter 3.0), and impacts (Chapter 4.0) in the EIS. Section 3.1.3 describes contaminated materials at the Moab site, including the estimated depth of contamination. Section 2.1.1.2 (Contaminated Material Remediation Operations) in the EIS provides a general overview of the activities that DOE would undertake to clean up the contaminated areas that are located outside the tailing footprint but inside the Moab site boundary; that section includes a map (Figure 2-3) and a discussion of the estimated mass and volume of contaminated site materials that would be excavated from the site, loaded into dump trucks, hauled to the top of the tailings pile, and deposited on top of the center of the pile for dewatering.

Document #1404 Comment #2 - response continued

Data obtained from characterization of the Moab site suggest that vicinity properties surrounding the site boundary contain contamination that would also require remediation. These properties include portions of state highway and railroad rights-of-way, BLM property, and Arches National Park.

Section 1.2.2 (Current Status of the Site) explicitly acknowledges the existence of debris from past dismantling of the mill buildings and associated structures. This debris was placed in an area at the south end of the pile and covered with contaminated soils and fill.

Section 2.1.2 (Characterization and Remediation of Vicinity Properties) provides a general overview of the activities that DOE would undertake to survey, characterize, and remediate Moab site vicinity properties. More detailed characterization activities would be performed after completion of the Record of Decision, as shown in Figure 2–1 in the EIS.

A systematic evaluation of the short- and long-term impacts that would result from construction activities at the Moab site under the on-site disposal alternative is detailed in Section 4.1, “On-Site Disposal (Moab Site).”

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Document #1404 Comment #3 Commentor: Fields, Sarah M.

Section F2.1.2 (On-Site Disposal) (page F-4). This section states, in part: To further protect the disposal cell, a buried riprap wall would be installed in the Colorado River floodplain. The wall would protect the stabilized tailings pile from river migration and erosion to meet the design life of the disposal cell.

This section fails to reference any maps or specific engineering plans for the proposed riprap wall. There is no mention of any studies or technical evaluations regarding how the wall would protect the tailings pile from the Colorado River meander, erosion, and flood potential. There is no technical report discussing the location and extent of the wall, its depth and width, material size, etc.

The assertion that the wall would “protect the stabilized tailings pile from river migration and erosion to meet the design life of the disposal cell” is not substantiated. The DEIS provides no data whatsoever that demonstrates that a wall would be protective of the tailings impoundment.

Further, there is no mention of the specific length of said “design life.” There is no discussion of any need to protect the disposal cell beyond the so-called “design life” or how that need would be met.

This section must substantiate its assertions regarding the ability of a riprap wall to protect the tailings pile for the length of time that river migration and erosion could impact the tailings. This time frame should not be limited. The requirements of 10 C.F.R. Part 1022 to assess floodplain and wetland impacts and avoid adverse impacts to wetlands and floodplains are not bounded by any “design life” time frames.

These failures in the Assessment must be corrected.

Response:

See response to comment #2. The conceptual location of the barrier wall is identified on Figure 2-3 of the EIS, the riprap size is provided in Section 2.1.4, and the estimated costs are provided in Table 2-33. Final specifications for cell design and mitigative engineering controls fall within the scope of the remedial action plan, which will be developed following the Record of Decision. DOE would use the recently prepared USGS report, which predicts the maximum flood velocities, and other relevant data sources to design a barrier wall and side slope armaments of sufficient robustness to withstand the forces of floodwaters.

DOE, federal and state agencies, and industry have demonstrated the effectiveness and implementability of riprap walls to prevent erosion on a nation-wide basis. DOE disagrees that the riprap wall would not be protective under the on-site disposal alternative. DOE also states in the EIS that inspections and maintenance would be completed as necessary to maintain these mitigative measures in perpetuity.

With regard to 10 CFR 1022, DOE is not required, nor are other agencies, to avoid adverse impacts to floodplains and wetlands. Agencies are required to consider alternatives if impacts would occur. DOE has complied with this requirement of DOE’s regulations and with Executive Orders 11988 and 11990.

Document #1404 Comment #4 Commentor: Fields, Sarah M.

Section F2.1.2 (On-Site Disposal) (page F-4). This section indicates that the only activities that would take place within the 100-year floodplain would be interim storage of borrow materials. The Assessment fails to mention of the interim and long-term groundwater correction activities that are in the floodplain. The Assessment fails to assess activities within the 500-year floodplain. The Assessment must give a full description of all on-site reclamation activities on the 100 and 500-year floodplains and describe how those activities will be protected from flood hazards.

Response:

Section F2.1.2 relates only to the construction of the actual disposal cell. The remainder of Section F2.1 (e.g., Section F2.1.3 – Ground Water Remediation) discusses other activities at the Moab site associated with the on-site disposal alternative. The 500-year floodplain is not discussed because no critical actions are planned at the Moab site. Section F1.0 has been clarified to reflect this distinction.

DOE has addressed all the concerns listed by the commentor in various sections of the EIS. Floodplains and wetlands are discussed under each alternative in Chapters 3.0 and 4.0, including maps. It was DOE's decision to reduce the volume of the EIS by avoiding redundancy between the text and appendixes. Also see response to comment #2.

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Document #1404 Comment #5 Commentor: Fields, Sarah M.

Section F2.1.2 (On-Site Disposal) (page F-4). This section states, in part: Long-term maintenance and monitoring of the disposal cell would include inspecting the floodplain and river boundary and the buried riprap wall.

Here there is no mention of the length of time that "long-term maintenance and monitoring of the disposal cell" would be required. There is no mention of the costs involved in long-term maintenance. There is no assessment of the possibility that, over time, the ability of institutions to continue to monitor and maintain the disposal site and any protective wall will diminish, while, at the same time, the potential for degradation of the impoundment (from all causes) will increase. The Assessment must address these long-term maintenance issues.

Response:

See responses to comments #2 and #4. Cost and maintenance issues are discussed in Section 2.7.3 of the EIS. Annual maintenance costs of \$35,000 could be required under all alternatives in perpetuity.

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Document #1404 Comment #6 Commentor: Fields, Sarah M.

Section F3.0 (Floodplain and Wetlands Descriptions), at F3.1 (Moab Site) (page F-5): The 100-year and 500-year floodplains for Moab Wash and the Colorado River occupy 150 acres, or the easternmost third of the Moab site (see Figure F-1). Floodplain alluvium consists of shallow sandy sediments and deeper gravelly sediments.

Here the map and the statement fail to discuss whether the area under the tailings impoundment is also on the flood plain of the Colorado River and Moab Wash and are also underlain by sediments. The Assessment fails to delineate the areas of the floodplain underlain by sediments from the Colorado River, the areas are underlain by sediments from Moab Wash, or areas underlain by both. Further, there is no mention of any past Moab Wash and Colorado River channel beds that underlie the site. Where the Colorado River has deposited sediments and created channels in the past is an important factor in assessing the potential for the Colorado River to create new channels in the floodplain.

The DOE should take all current data related to the sediments underneath the site and in the area, develop new data based on fieldwork, and properly characterize the sediments and structures (including their source) that underlie the Moab site. The DOE should create a three-dimensional characterization of the geological structures, channels, and sediments and create a history of the river/wash/site interactions. This has NEVER been done. Without such data and interpretations, the DOE has no basis for many of its assumptions related to long-term site stability.

Response:

A contour map showing the extent and elevation of the top of Colorado River gravels at the Moab site is presented in the calculation set "Lithologic, Well Construction, and Field Sampling Results from the 2002 Field Investigation" (DOE 2002b). This information was used in combination with all historical and current data to develop the 3-dimensional contaminant model (Section 5.5.1 in the SOWP) and the geologic cross-sections (Plates 2 through 10 in the SOWP). Also see response to comment #2.

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Document #1404 Comment #7 Commentor: Fields, Sarah M.

Section F4 (Floodplain and Wetlands Impacts), F4.1 (Moab Site—On-site Disposal Alternative) (page F-14). The Assessment improperly limits the consideration floodplain and wetland impacts to the impacts associated with the site itself. This Assessment fails to address the potential adverse impacts of the on-site disposal alternative on the Matheson Wetlands. There is no assessment of the potential of contamination from the site to impact the Matheson Wetlands via a pathway underneath the Colorado River. There is no mention of impacts to the Matheson Wetlands via air-borne contamination from the site. The Assessment must be revised to include these aspects of floodplain and wetland impacts, in a comprehensive manner.

Response:

DOE's position is that contamination is not migrating under the river and affecting the Matheson Wetlands Preserve. However, there are responsible opposing views on the fate and transport of site-derived contaminants in ground water. Both views on the question of contaminant migration under the river are based on differing interpretations of technical data. A new section on responsible opposing views (Section 2.6.4) has been added to the final EIS.

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Document #1404 Comment #8 Commentor: Fields, Sarah M.

The Assessment must address the continued contamination of the Moab site floodplain. The Assessment must address the extent to which the removal of the tailings from the floodplain would impact future floodplain and site contamination emanating from the impoundment.

Response:

See responses to comments #2 and #4. The potential for continued contamination of the floodplain is discussed at length in the EIS, including uncertainties associated with each alternative and the potential for catastrophic failure. Under all action alternatives, active ground water remediation would intercept contamination until such time (75 to 80 years) that levels would naturally attenuate to below applicable aquatic standards.

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Document #1404 Comment #9 Commentor: Fields, Sarah M.

The Assessment fails to address potential adverse impacts to floodplains and wetlands in the event of a tailings impoundment failure. A tailings pile failure would result in significant adverse impacts to the floodplain of the Colorado River downstream, the Moab Valley, and Matheson Wetlands. The Assessment must include a full description and evaluation of those adverse impacts on the floodplain of the Moab Valley and the Colorado River downstream and the Matheson Wetlands.

Response:

Section 4.1.17 of the EIS addresses the potential impacts from catastrophic failure.

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Document #1404 Comment #10 Commentor: Fields, Sarah M.

Section F4.1.1 (Floodplains). This section states, in part: The buried riprap wall would permanently alter the floodplain by stabilizing soils in the floodplain.

Here the Assessment does not evaluate the potential adverse impacts on the Colorado River, the Moab Valley, and the Matheson Wetlands of the riprap wall during a flood event. The Assessment must include such an evaluation.

This section fails to discuss the impacts to the Matheson Wetlands and floodplain at the site, downstream, and at Moab in the event that the riprap wall fails to serve its design function. The Assessment must include such an evaluation.

Response:

A systematic evaluation of impacts to the floodplain and wetlands that could occur at the site, including the Matheson Wetlands Preserve, are detailed in Section 4.1.5.1 in the EIS and in Appendix F (Floodplain and Wetlands Assessment for Remedial Action at the Moab Site). Uncertainties related to the occurrence of a catastrophic flood and to the impacts that would occur if a riprap wall failed to serve its design function are summarized in the EIS (see Tables S1 and 2–33, Consequences of Uncertainty, item #10). The assessment of impacts to the floodplain and wetlands will be one factor among many that will be evaluated when DOE selects the disposal site and method in the Record of Decision.

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Document #1404 Comment #11 Commentor: Fields, Sarah M.

Section F4.4 (Off-Site Disposal—White Mesa) (page F–16): The slurry pipeline transportation option would involve crossing the Colorado River and the Matheson Wetlands Preserve, along with 11 perennial streams and at least 21 intermittent drainages. There have been previous utility crossings in the Matheson Wetlands Preserve, and the pipeline for this project would follow these as closely as possible.

The DEIS and Assessment fail to discuss whether the pipeline and slurry operation would be owned and operated by a private entity or the federal government. It fails to state what federal regulations apply to the construction and operation of the pipeline. At times, the DEIS gives the impression that the pipeline and slurry operation would be a DOE operation. However, International Uranium (USA) Corporation (IUSA), in its May 2003 proposal, specifically stated its desire that the slurry operation and pipeline be under their ownership and control. This must be clarified.

Response:

Section 2.5.2.2 indicates that under the White Mesa Mill slurry pipeline alternative, IUC would take ownership at the entrance to the slurry pipeline at the Moab site under the regulatory authority of the State of Utah. Slurry pipeline operations to the other off-site alternative locations would be the sole responsibility of DOE and its contractors.

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Document #1404 Comment #12 Commentor: Fields, Sarah M.

The Assessment gives the impression that no new pipeline corridors would be involved in the construction of the slurry pipeline. This is backed by the failure to include a map in the Assessment that identifies current pipeline corridors and proposed new pipeline corridors.

Response:

Section 2.2.4.2 states that approximately two-thirds of the pipeline corridor would follow existing corridors. The figures in Appendix C identify the specific pipeline segments that would parallel existing pipelines.

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Document #1404 Comment #13 Commentor: Fields, Sarah M.

There is no basis for the assumption that permission would be given to build a pipeline to carry the slurry across the Matheson Wetlands. There is also no basis for the assumption that permission would be given to build a pipeline across federal lands. The Assessment fails to reference the Federal Regulation applicable to obtaining a pipeline permit over Department of Interior, Bureau of Land Management, lands—43 C.F.R. 2800.

Response:

DOE has worked closely with several cooperating agencies, as required by the CEQ NEPA regulations. DOE is aware of BLM's right-of-way regulations for use of public lands under Title V of the Federal Land Policy and Management Act. With regard to pipeline construction over private lands, DOE must make assumptions in order to evaluate all reasonable alternatives. The EIS does not assume that private landowners would agree to the pipeline route.

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Document #1404 Comment #14 Commentor: Fields, Sarah M.

Here the Assessment must provide information regarding what permissions and permits are required for the pipeline, applicable statutes and regulations, who will apply for such permissions and permits, the position of The Nature Conservancy and the State of Utah regarding whether they would grant permission for a slurry pipeline across the Matheson Wetlands, and whether the DOE can or is willing to exert powers of eminent domain to assure that a pipeline can be constructed over private or State of Utah land. The DOE has not been forthright in discussing these important aspects of the slurry pipeline in the DEIS and Assessment.

Response:

Both federal and state regulations have provisions to facilitate the installation and use of pipelines, power lines, highways, and other infrastructure components that serve local, regional, and national needs. Because most of the pipeline route to the White Mesa Mill would parallel existing pipeline routes, it is clear that access to public and private lands has been obtained in this region in the past, and therefore, for the purpose of evaluating alternatives in the EIS, a pipeline is a reasonable alternative. However, the potential difficulty in obtaining access is recognized. The comments of the Nature Conservancy can be found in Document #699.

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Document #1404 Comment #15 Commentor: Fields, Sarah M.

Section F4.4 (Off-Site Disposal—White Mesa) (page F–16). This section states, in part: Unavoidable disturbance to wetlands along waterways would be mitigated in accordance with USACE Section 404 guidelines (see Section F4.1.2).

The Assessment fails to map and clearly identify the disturbances (unavoidable and avoidable) along and through waterways. No pictures or technical studies to back up any of the discussion of wetland, stream, and dry watercourse disturbances. Everything is very general and specificities are avoided. The Assessment must provide more specifics and substantiation with respect to waterway disturbances.

Response:

Given the distance involved, it was not practical to include maps with more detail than those provided in Appendix C, although DOE did consult the data on these figures in more detail to develop its impact analyses. Specific details concerning the extent of the disturbance needed to quantify acreages that would be impacted are unknown because the alternative is conceptual. If the White Mesa Mill alternative were chosen, a more detailed assessment of the disturbance would be done in order to issue a Floodplain and Wetlands Statement of Findings.

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Document #1404 Comment #16 Commentor: Fields, Sarah M.

Section F4.4 (Off-Site Disposal—White Mesa) (page F–16). This section states, in part: Some of the springs or seeps adjacent to the White Mesa Mill site may be hydrologically connected to the site, and there could be a potential for ground water contamination due to spills, pipeline rupture, or other accidents. Mitigation to minimize the possibility of exposure would be implemented.

No impacts to floodplains and wetlands would be expected from monitoring and maintenance of this facility.

The Assessment fails to provide an evaluation of the long-term impacts of the White Mesa alternative on the springs and seeps that are “hydrologically connected to the site.” The Assessment fails to provide any basis for its assumption that, over the long term, monitoring and maintenance of the facility would prevent adverse impacts to the seeps and springs. The Assessment fails to acknowledge that, over the lifetime of the hazard, the potential for adverse impacts to the seeps and springs will increase, while the effectiveness of monitoring and maintenance of the facility will inevitably decrease.

Response:

Section 4.4.3.1 in the EIS presents the ground water impacts and assumptions related to the White Mesa Mill disposal alternative, including the potential for migration of existing and Moab-site contaminants to reach springs and seeps downgradient of the White Mesa Mill site. These factors and the long-term limitations and effectiveness of monitoring are considered in sufficient detail for evaluation of alternatives in this EIS.

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Document #1404 Comment #17 Commentor: Fields, Sarah M.

The potential for adverse impacts on ground water will, in great part, be dependent on the design and construction of the impoundment and the placement of the tailings in that impoundment. At this time, there is no information available on these aspects of the White Mesa proposal.

The Assessment fails to provide any bases for its assumptions re the impacts related to the White Mesa alternative. These failures must be corrected in the final Assessment.

Response:

Section 2.2.5.2 of the EIS summarizes the proposed White Mesa Mill disposal cell construction and operations. Section 4.4 in the EIS presents the impacts and assumptions related to the White Mesa Mill disposal alternative. DOE believes these are presented and considered in sufficient detail for comparison and evaluation of alternatives in this EIS.

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Document #1404 Comment #18 Commentor: Fields, Sarah M.

Effects of National Concern. The Assessment fails to discuss whether the proposed floodplain actions may result in effects of national concern. According to 10 C.F.R. § 1022. 4, such effects are those that, because of the high quality or function of the affected resource or because of the wide geographic range of effects, could create concerns well beyond the locale or region of the proposed action.

The Assessment improperly fails to acknowledge that the potential adverse short-term and long-term effects of the disposal of the Moab tailings in the floodplain of the Colorado River creates a concern far beyond the Moab Project site and the Moab Valley.

The Colorado River is the 5th largest river in the United States and is the source of drinking water for millions of people. It is a recreational resource for millions and the source of agriculture waters thousands. The waters of the Colorado below the site flow through federal parks and recreation areas, tribal sovereign lands, and a foreign state. A tailing failure scenario would be a catastrophe of national and international, not just local, proportions.

It is unconscionable for the DOE not to have recognized, identified, and considered effects of national concern in the Assessment and in the DEIS.

Response:

DOE disagrees with the comment. Without a failure or flooding, there would be no impacts to the resources identified in the comment. Flooding is assumed to occur, and the conservative analyses show (Section 4.1.3.1) that aquatic standards would not be exceeded, and, therefore, there would be no measurable impact from flooding. Even though improbable, a catastrophic failure has been assumed, and the impacts are quantified in Section 4.1.17. Also, the analyses do not support the commentor's assertion that a catastrophic failure would be on the scale of a national or international disaster.

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Document #1404 Comment #19 Commentor: Fields, Sarah M.

Navigable Waterway. There is no mention in the Assessment that the wetlands associated with the site and the Matheson wetlands are part of a navigable waterway and subject to the provisions of Section 13 of the Rivers and Harbors Act of 1899. Section 13 (the “Refuse Act”), in part, prohibits the deposition of any material on the bank of any navigable water where it is liable to be washed into the navigable water, whereby navigation may be impeded or obstructed.

The Assessment must include a discussion of this act and its relation to the impacts to wetlands and floodplains under consideration here.

Response:

DOE is not proposing to discharge any material into the wetlands associated with the site or into the Matheson Wetlands Preserve as part of any alternative.

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Document #1404 Comment #20 Commentor: Fields, Sarah M.

Subsidence. The Assessment fails to discuss and address the impacts on the floodplain and wetlands that will take place over time due to the dissolution of salt below the site. The DOE must take into consideration long-term subsidence of the site when it assesses adverse impacts to the floodplain and wetlands related to the Moab site.

Response:

The commentor is correct that the EIS does not explicitly address the impacts of long-term natural basin subsidence due to salt dissolution on floodplain and wetlands. This is because of the extremely long time frame and consequent uncertainties involved. Section 4.1.1 addresses the geology and soil impacts at the Moab site. Over geologic time, the process of subsidence, which is caused by ground water dissolving the salt formations under the tailings pile (Section 3.1.1.4), will change the position of the tailings pile in relation to the underlying ground water and will eventually cause the bottom of the tailings pile to converge with the underlying ground water at an estimated rate of approximately 1.4 feet per 1,000 years. At this rate, DOE estimates that the tailings in the disposal cell would come into permanent contact with ground water in approximately 7,000 to 10,000 years, assuming the minimum depth to ground water ranges from 5 to 7 feet. The regulatory time frame for effectiveness established in 40 CFR 192 (Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings) is 200 to 1,000 years.

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Document #1404 Comment #21 Commentor: Fields, Sarah M.

10 C.F.R. Part 1022—Compliance With Floodplain And Wetland Environmental Review Requirements.

As stated in Part 1022, it is the intent of the DOE to incorporate floodplain management goals and wetland protection considerations into its planning, regulatory, and decision-making processes, and preserve natural and beneficial values served by floodplains and wetlands. Part 1022 implements the directives set forth in Executive Order 11988 and Executive Order 11990.

The Executive Orders demand that a floodplain and wetlands assessment serve as a decision-making document. In order to fulfill that function, the assessment must include several things. Below is an evaluation of how well the Floodplain and Wetlands Assessment for Remedial Action at the Moab Site meets the Executive Order and regulatory requirements.

A. 10 C.F.R. § 1022.13 (Floodplain or wetland assessment), at (a)(1), requires a map showing the location of the proposed action with respect to the floodplain and/or wetland.

None of the maps in the Assessment show the location and extent of the Matheson Wetlands. There is no map that shows the floodplain of the Colorado River that would be impacted in the event of a failure of the tailings impoundment. The map of the White Mesa site does not show the full extent of the pipeline. The size of the map makes it impossible locate any of the washes or streams that might be impacted by the pipeline.

Response:

Figure F-1 delineates the floodplains that would be affected by the proposed actions. Additionally, wetland delineations are provided in the EIS text and Appendix C figures; because this information was readily available, it was not duplicated in Appendix F. Given the distance involved, it was not practical to include maps with more detail than those provided in Appendix C, although DOE did consult the data on these figures in more detail to develop its impact analyses. The postulated catastrophic failure analysis has been included to support decision-making among alternatives. Because DOE can find no plausible mechanism for such a failure, expanding the screening analysis to include detailed impacts on wetlands and floodplains was determined to be too speculative for inclusion in the EIS.

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Document #1404 Comment #22 Commentor: Fields, Sarah M.

10 C.F.R. § 1022.13 (a)(2) (Floodplain or wetland Impacts) requires:

This section shall discuss the positive and negative, direct and indirect, and long- and short-term effects of the proposed action on the floodplain and/or wetland. This section shall include impacts on the natural and beneficial floodplain and wetland values (Sec. 1022.4) appropriate to the location under evaluation. In addition, the effects of a proposed floodplain action on lives and property shall be evaluated. For an action proposed in a wetland, the effects on the survival, quality, and function of the wetland shall be evaluated.

The Assessment clearly fails to provide a discussion of the long-term effects of the on-site disposal alternative on the Matheson Wetlands, the floodplain in rest of the Moab Valley, and the Colorado River floodplain down river from the site.

There was no assessment of the long-term impacts on the” natural and beneficial floodplain and wetland values” associated with those floodplains and wetland. According to Section 1022, floodplain and wetland values include, but are not limited to, “living values (e.g., conservation of existing flora and fauna including their long-term productivity, preservation of diversity and stability of species and habitats), cultural resource values (e.g., archeological and historic sites), cultivated resource values (e.g., agriculture, aquaculture, forestry), aesthetic values (e.g., natural beauty), and other values related to uses in the public interest (e.g., open space, scientific study, outdoor education, recreation).” There is no discussion in the assessment of how, over the long-term and the very-long term, the Moab disposal alternative will eventually impact these values at the Matheson Wetlands, Moab Valley, and floodplain downstream from the site.

There is no discussion of either short or long-term impacts on lives and property associated with the failure of the tailings impoundment or and failure of the proposed mitigative measure (riprap wall).

There is no discussion of the long-term effects on the survival, quality, and function of the Matheson Wetlands as a result of on-site disposal.

Response:

DOE disagrees that its analyses have failed to meet the spirit and intent of applicable regulations. Because contamination currently occurs within and beneath floodplains and wetlands, remedial actions must occur within these features. However, the long-term benefit of short-term remediation impacts would benefit these environments. Because both the on-site and off-site alternatives, coupled with active ground water remediation, would achieve compliance with 40 CFR 192 and meet protective levels for aquatic species, there would be no long-term potential to impact the Matheson Wetlands Preserve, the Moab Valley, or downstream users without assuming a failure of engineered systems or other remedial efforts. Catastrophic failure, even though highly unlikely, was assumed in the EIS to support decisionmaking and the choices among alternatives. Because there is no plausible mechanism for such a failure, the inclusion of such an accident was determined to be inappropriate for the floodplain and wetlands assessment.

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Document #1404 Comment #23 Commentor: Fields, Sarah M.

10 C.F.R. § 1022.13 (a)(3) (Alternatives) requires that DOE evaluate measures that mitigate the adverse effects of actions in a floodplain and/or wetland.

The Assessment mentions the construction of a riprap wall that would act to mitigate adverse effects, but that measure has in no way been “evaluated” for short or long -term effectiveness in the Assessment.

Response:

Riprap is an accepted engineering control to mitigate adverse impacts and stabilize improvements such as bridges and dam embankments nation-wide. Because riprap would be sized to withstand the maximum velocities projected recently by the USGS during flooding, it is reasonable to assume that the barrier wall and side slope armaments would perform as designed. Failure of these systems was assumed for the catastrophic analyses provided in Section 4.1.17 of the EIS.

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Document #1404 Comment #24 Commentor: Fields, Sarah M.

10 C.F.R. § 1022.3 (Policy) sets forth various mandates related to floodplain management and wetland protection applicable to the Moab Mill Project. This section requires, in part, that the DOE:

- Minimize the impact of floods on human safety, health, and welfare;
- Restore and preserve natural and beneficial values served by floodplains;
- Minimize the destruction, loss, or degradation of wetlands;
- Preserve and enhance the natural and beneficial values of wetlands.
- Undertake a careful evaluation of the potential effects of any proposed floodplain or wetland action.
- Avoid to the extent possible the long- and short-term adverse impacts associated with the destruction of wetlands
- Identify, evaluate, and as appropriate, implement alternative actions that may avoid or mitigate adverse floodplain or wetland impacts.

The Assessment must provide information regarding how each of these mandates would be met for each alternative under consideration. The Assessment must provide a table comparing the floodplain and wetland impacts of the various alternatives and how the wetland and floodplain requirements would be met.

Response:

See responses to comments #2, #4, #5, #8, #21, and #22. In addition, DOE regulations and guidance do not “mandate” the list of items outlined above. 10 CFR 1022.1 and Executive Orders 11988 and 11990 require federal agencies “to ensure that the potential effects of any actions it may take in a floodplain are evaluated...”. 10 CFR 1022.3 states that “DOE shall...(a) avoid to the extent possible the long- and short-term impacts...and avoid...floodplain and wetland development wherever there is a practicable alternative.” 10 CFR 1022.3(b) also requires DOE to incorporate goals to protect wetlands “to the extent practicable.” In assessing alternatives in the EIS and preparing the Floodplain and Wetlands Assessment in Appendix F, DOE has complied with these requirements.

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Document #1404 Comment #25 Commentor: Fields, Sarah M.

Conclusion: On-Site Disposal Alternative. Due to the potential of the tailings impoundment to continue to adversely impact the floodplain of the Colorado River at the site and the long-term potential for impacts of the Matheson Wetlands and floodplains in the Moab Valley and downstream, the only alternative that would remove the source of those adverse impacts is an off-site disposal alternative.

There is no basis for a finding that “no practicable alternative to locating or conducting the action in the floodplain or wetland is available.” The DOE has already identified three “practicable” off-site disposal alternatives and evaluated them in the DEIS. Since they were considered in the DEIS, by definition, there are “practicable” alternatives. The DOE is not authorized to consider impracticable alternatives in the National Environmental Policy Act (NEPA) process.

Therefore, in order to avoid the short-term and long-term adverse impacts to the wetlands and floodplains impacted by the proposal, the on-site disposal alternative must be rejected.

Response:

See responses to comments #2, #4, #22, and #24.

Document #1404 Comment #26 Commentor: Fields, Sarah M.

Conclusion: White Mesa Disposal Alternative. The off-site disposal alternative that would have the most impacts on wetlands is the slurry pipeline to White Mesa. The pipeline would adversely impact the Matheson Wetlands, watercourses, and other wetlands.

The disposal of the tailings at White Mesa has the reasonable potential to impact a unique wetland at Ruin Spring, which is on land belonging to the people of the United States. I have visited this spring. Grazing cattle (associated with a Bureau of Land Management grazing permit) and wildlife depend on the spring, which is a rare spring in a very, very dry area. The DOE cannot rely on monitoring and maintenance of the facility over the long term to protect the spring from contamination.

There is no basis for a finding that there is “no practicable alternative” to disposing of the tailings at White Mesa or slurrying the tailings to White Mesa. The DOE has already identified two “practicable” off-site disposal alternatives, Klondike Flats and Crescent Junction, and evaluated them in the NEPA process. Implementation of either of these two off-site disposal alternatives would result in few, if any, adverse wetland and floodplain impacts.

Therefore, in order to avoid the short-term and long-term adverse impacts to the wetlands by the White Mesa proposal, that disposal alternative must be rejected.

Response:

See responses to comments #2, #4 and #24. The potential to affect water quality at Ruin Spring is assessed under Section 4.4.3.1 of the EIS and could occur within 3,500 to 7,700 years. In addition, an alternative cannot be rejected solely because it may adversely affect floodplains or wetlands. These resources are considered together with other natural resources and human health impacts in the decision-making process. The commentor’s preferences will be considered by DOE in its final decision-making.

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Document #1405 Comment #1 Commentor: Brian, Danielle

The Project On Government Oversight (POGO) investigates, exposes, and seeks to remedy systemic abuses of power, mismanagement, and subservience by the federal government to powerful special interests. Founded in 1981, POGO is a politically-independent, nonprofit watchdog that strives to promote a government that is accountable to the citizenry. POGO appreciates the opportunity to comment on the Draft Environmental Impact Statement (DEIS) for the “Remediation of the Moab Uranium Mill Tailings, Grand and San Juan Counties, Utah” (69 Fed. Reg. 70,257 (2004)). POGO vehemently requests that the government relocate the Moab Uranium Mill Tailings to a safe location.

Since the late-1990’s, POGO has voiced concerns about the government’s plan to decommission the Moab Uranium Mill Tailings – located in a 130-acre unlined pile about 750 feet from the Colorado River. At that time the tailings pile was the jurisdiction of the Nuclear Regulatory Commission (NRC).

In 1999, POGO released its report *NRC Sells Environment Down the River*, which confirmed that the Atlas Corporation, the polluter that owned the Moab site, had bullied the NRC into accepting a cleanup plan that would have saved the company millions of dollars. That plan, however, fell far short of government and public safety standards. The NRC considered capping the nearly 12 million tons of uranium mill wastes at its current location rather than moving it to a safe location.

As you probably know, studies showed that merely capping the 130-acre tailings pile would allow the continued contamination of the ecosystem in and around the now defunct mill. The leaching from the tailings pile has negatively affected the Colorado River. Additionally, the pile is only 10–15 feet above an aquifer, is situated on the flood plane of the Colorado, and is filled with radioactive uranium, ammonia, molybdenum, aluminum, iron, nitrates, and sulfates that are contaminating groundwater that feeds into the river. Specifically, groundwater from the Moab site would continue to seep into the Colorado River, the source of drinking water for more than 25 million residents in California and Arizona and home to several endangered species of fish.

In 2000, POGO and many conservation groups pushed for and won their battle to have the jurisdiction of the tailing pile moved to the Department of Energy (DOE), which possessed the required experience in moving similar sites.

Now DOE is in the same position that the NRC was in nearly ten years ago – a drawn out decision to cap or relocate the uranium tailings. The current DEIS states that relocation of the uranium tailings pile will cost from \$329 to \$464 million, which is a far cry from the NRC’s and Atlas’ estimates in the late-1990s that relocating the tailings pile would cost \$60 to \$114 million. After years of delay and debate on relocation verses capping the uranium tailing pile at its current location, the taxpayer is left holding a ballooning bill in a financially restrictive budget crisis. More disturbing is the fact that radioactive and toxic waste is still affecting the Colorado River and the drinking water for the 25 million people who live downstream. DOE must do the right thing and end the debate.

Document #1405 Comment #1 - continued

Response:

The EIS analyzes the potential environmental impacts and projected costs of the on-site and off-site disposal alternatives. In the final EIS, DOE has identified off-site disposal at the Crescent Junction site using rail transportation and active ground water remediation as its preferred alternatives for the remediation of the Moab mill tailings, vicinity properties, and contaminated ground water. At least 30 days following the issuance of the final EIS, DOE will issue a Record of Decision that will state what its decision is, identify the alternatives considered by the agency, and state whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted and, if not, why they were not.

Document #1430 Comment #1 Commentor: Darke, John

I'm happy to hear in your message that there is going to be a public hearing in January. I'm also happy that you're still receiving comments. This is a request: the DOE Grand Junction Office received e-mails suggesting that it was the appropriate in conformance and CEQ intent that the Initial Phase Investigation particularly be made available in the reading room and also in respect that some of the data set that is mentioned in that record, USGS record, it is there that the data set be made available. I would refer you to the USGS website and the link--the appropriate link indicates that in order to receive the data set is essentially to treat it as a commercial enterprise. Some can't afford \$100 an hour or \$70 or whatever. The download time of the initial investigation report itself is 48 megabytes. Its intent was to place copies have been received of the report at the courthouse. It was quite a delay until after the suspense on the comment period. Suggest that we lighten up in a group-phased effort to provide affordable records. This is John Darke.

Response:

DOE believes that the commentor is referring to a USGS report received after the draft EIS was issued. The report, Initial-Phase Investigations of Multi-Dimensional Streamflow Simulations in the Colorado River, Moab Valley, Grand County, Utah, 2004 (USGS 2005), was not available for the draft EIS. It has been used in preparing the final EIS and is available in the public reading rooms.

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Document #1432 Comment #1 Commentor: Gosnell, James

As I resident of San Diego, California, the current state of the uranium tailings pile concerns me. San Diego currently gets about two-thirds of its water from the Colorado River. This is the water that I use to wash laundry, drink, and bathe. Yet out in Moab, Utah a major health risk and threat to our water supply exists. The uranium tailing pile located in Moab is a diaster waiting to happen. Daily the pile leaks 15,000 agllons of toxic chemical chemicals into the river in a day, it could be easily subjected to a terrorist attack and used to poison the water in all of Southern California, Nevada, and Arizona. If it isn't attacked by terrorists a flood could easily wipe 80% of the pile into the river, spelling diaster for the Untied Sates Government and all citizens using the Colorado for a water supply.

Response:

DOE acknowledges the commentor's concern regarding the importance and use of the Colorado River as a downstream water supply and in the EIS has summarized the potential impacts from a tailings pile failure. DOE agrees that there is a possibility that at some point in the future, especially considering geologic time, the river will cross the Moab site. However, DOE's analyses conclude that engineering controls could be used to resolve this issue for the near term (200 to 1,000 years). In Section 4.1.17 of the EIS, a catastrophic failure of an on-site disposal cell is assumed and the impacts quantified. Additionally, the impacts of periodic flooding are assessed in Section 4.1.3.1. If on-site disposal were selected, the cell would include side slopes armored with riprap of sufficient size to resist erosion from floodwaters. The design would also include a barrier wall between the river and the capped pile to mitigate against river encroachment. These measures would further reduce the already low probability of catastrophic failure of an on-site disposal cell and further protect the water supply. The differing opinions over river migration are discussed in Section 2.6.4. Based on the analyses in the EIS and uncertainties such as those in the comment, DOE has identified off-site disposal at the Crescent Junction site as its preferred surface remediation alternative.

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Document #1432 Comment #2 Commentor: Gosnell, James

According to a recent survey by the US Department of Energy, the uranium tailing pile currently is not in compliance with EPA standards for Uranium concentration or Ammonium concentration. The allotted uranium concentration is .04 mg per l; yet in some parts of the pile the concentration is as high as 15 mg per L. That is 37500% percent above the EPA's accepted level! That kind of violation causes unnecessary stress to many concerned residents. Similarly, the ammonian level set by the EPA is 3mg per L; despite this allotted concentration the entire pile never drops below 50mg per liter. That figure is a staggering 1667% above the allotted EPA levels.

Response:

The commentor is correct that concentrations of uranium and ammonia are elevated in the ground water beneath the site. For this reason, DOE has already undertaken ground water interim actions to reduce contaminant migration. These actions include capturing and evaporating some of the most contaminated ground water from the legacy plume that is entering the Colorado River and reducing the contaminant seepage from the pile area that has potential to migrate into the ground water beneath the pile. These interim actions have proven to be very effective in significantly reducing the total mass of contaminants reaching the river.

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Document #1432 Comment #3 Commentor: Gosnell, James

I propose that the citizens of all areas drinking the Colorado river water, that is consistently poisoned by the Uranium tailings pile at Moab, Utah, petition for the pile to become part of the EPA Superfund Act. Superfund is the perfect solution because it will call for removing and clearing the waste at no cost to the victims of hazardous waste poisoning, even if that poisoning may not be lethal.

Response:

The commentor's proposal is noted and his support for off-site disposal will be considered, along with similar comments, when DOE selects the disposal site and method in the Record of Decision.

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Document #1501 Comment #1 Commentor: Eddy, Daniel Jr.—Colorado River Indian Tribes

On behalf of the Colorado River Indian Tribes (CRIT), I write regarding an issue that has potential to significantly impact the members of this tribe as well as a number of communities along the Colorado River for generations to come.

That issue involves the approximately 11.9 million tons of radioactive uranium tailings sitting on the banks of the Colorado River in Moab, Utah. This pile contains very high levels of radioactive and toxic materials that are already leaking into the river and if left unchecked, will have a detrimental effect on virtually everything downstream. This is especially alarming to us because our entire economy centers primarily on agriculture and tourism. Our very existence is therefore heavily dependent on the water quality of the Colorado River.

To remediate the site, the Department of Energy is currently considering three options. One is to move the tailings off the river to a secure and safe location north of Moab. A second is to cap and leave the pile in place. The third option is to send the radioactive and toxic material to a facility near White Mesa, Utah.

While none of the options considered offers any safe long-term solution, we stand with our Ute neighbors in opposition to relocating the material to the proposed White Mesa site. The White Mesa site is too close to the Ute reservation and is situated atop and next to ancient sites that have profound cultural and spiritual significance to the tribe. The site north of Moab makes the most sense and is preferred over the other two options.

Unquestionably, because of the tremendous presented threat, the pile must be removed away from the Colorado River. However, serious consideration needs to be given to the location of any potential dumpsite and its proximity to neighboring communities and any relevant cultural and spiritual sites.

Thank you for taking the time to hear our concerns and if you should have any questions in this regard, please feel free to contact me at the number provided above.

Response:

DOE's analyses in the EIS demonstrate that both the on-site and off-site disposal alternatives would offer safe, long-term solutions with varying degrees of certainty and impacts. Based on factors such as those identified in the comment, DOE has identified off-site disposal at Crescent Junction as its preferred alternative. DOE will continue to consider the public's comments for final decision-making.

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Document #1503 Comment #1 Commentor: Juan-Suanders, Vivian—Inter Tribal Council of Arizona

The Inter Tribal Council of Arizona, an organization of 19 Tribal governments, is hereby expressing its support of the Ute Mountain Ute Tribe and the City of Moab, Utah regarding remediation of the Atlas Mill Site. The approximate 11.9 million tons of uranium tailings now sitting on the banks of the Colorado River in Moab at said Site should be removed off the River to a secure and safe location north of Moab.

Response:

The Inter Tribal Council of Arizona's support for removing the tailings pile from the banks of the Colorado River is noted, and DOE will consider this and other opinions in its final decision-making.

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Document #1503 Comment #2 Commentor: Juan-Suanders, Vivian

A number of Indian Reservations, including the Quechan, Cocopah, Colorado River Indian Tribes, Havasupai and Hualapai, are directly located on the Colorado River within the geographic boundaries of the States of California, Arizona and Nevada, downriver from the Atlas Mill Site. The tribes have rights to the Colorado River stemming from the establishment of their reservations. The river is central to the culture and economy of each tribe. The release of hazardous substances into the River would threaten their subsistence and way of life. All member tribes of the ITCA join with the Ute Mountain Ute Tribe and the City of Moab in their opposition to any Atlas Mill Site remediation plan whereby the uranium tailings would remain in place on the River's bank. Even if the pile is capped, no guarantee can be given that contamination of the River, due to gradual leaking or catastrophic event such as flooding, will never occur. So long as the uranium tailings remain on the River's bank, a serious threat exists for all downriver communities and tribes as well as Moab.

Response:

DOE acknowledges the commentor's support for relocating the uranium tailings pile from its current location and will consider this comment in making its final decision regarding disposition of the tailings.

Regardless of whether, in the Record of Decision, DOE ultimately selects the on-site or the off-site disposal alternative, DOE is confident that the disposal cell would effectively isolate mill-related contaminants for the 200- to 1,000-year effectiveness period specified in 40 CFR 192. DOE is also confident that surface remediation combined with active ground water remediation and the final disposal cell design and construction would reduce the possibility of short-term and long-term impacts to human health and the environment to levels that would comply with the requirements of 40 CFR 192.

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Document #1503 Comment #3 Commentor: Juan-Suanders, Vivian

All of the named tribes have many cultural, traditional and sacred places both within and without their reservations. All too often, the United States contemplates or takes action without proper consideration of the depth and scope of the hurt and harm experienced by Native people by the destruction and desecration of sacred places. We join with the Ute Mountain Ute Tribe and the City of Moab in their opposition to any Atlas Mill Site remediation plan whereby the uranium tailings would be sent to a facility near White Mesa, Utah. The White Mesa facility is located near and/or at the Ute Reservation and sacred places with profound cultural and spiritual significance to the Ute Tribe.

The United States has a trust responsibility for all the above named Tribes. It should not allow or pursue any remediation of the Atlas Mill Site which disturbs the Reservations or sacred sites of these tribes in any way.

We strongly support the Ute Mountain Ute Tribe in its recommendation that Atlas Mills remove the uranium tailings off the Colorado River to a safe and secure location north of Moab. Remediation which threatens the Colorado River, such as capping the existing pile in place, or which disturbs Ute Mountain Ute Tribe sacred places, such as sending the tailings to White Mesa, should not be considered.

The 19 member Tribes of the Inter Tribal Council of Arizona urge you to take action as identified in this letter. Your attention to this matter is greatly appreciated.

Response:

See responses to comments #1 and #2. DOE has considered, and will continue to consider, the many comments received from Native Americans and other members of the public concerning protection of archaeological and sacred sites at White Mesa. The White Mesa Mill off-site disposal alternative is analyzed in the EIS because it is technically feasible; it could provide the benefit of co-location of uranium mill tailings waste; and the associated impacts may have the potential to be mitigated in an acceptable manner. NEPA requires that DOE consider all reasonable alternatives in the EIS.

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Document #1503 Comment #4 Commentor: Juan-Suanders, Vivian

RESOLUTION OF THE INTER TRIBAL COUNCIL OF ARIZONA

Title: Support of the Fort Mojave Tribe's opposition to movement of uranium tailings to White Mesa, Utah

WHEREAS, the Inter Tribal Council of Arizona, a council of 19 tribal governments in Arizona, provides a forum for tribal governments to advocate for national, regional and specific tribal concerns and to join in united action to address these issues; and

WHEREAS, the member tribes of the Inter Tribal Council of Arizona have the authority to act to further their collective interests as sovereign native governments; and

Document #1503 Comment #4 - continued

WHEREAS, the member tribes of the Inter Tribal Council of Arizona support the sovereign right of Indian nations to protect their traditional lands, environments, sacred sites and cultural resources; and

WHEREAS, the Inter Tribal Council of Arizona has the charge to support and represent particular member Tribes on matters directly affecting them upon their request; and

WHEREAS, the Fort Mojave Indian Tribe is requesting support opposing the transfer of 11.9 million tons of uranium tailings presently located on the banks of the Colorado River in Moab, Utah to a facility in close proximity to White Mesa, Utah, and leaving the mine tailings capped or uncapped at its present location; and

WHEREAS, the uranium tailings now located on the banks of the Colorado River threaten not only the health and viability of the Colorado River but all communities specifically Ft. Mojave, Colorado River Indian Tribes, Hualapai, Havasupai, Quechan and Cocopah Tribes, downriver from the Atlas Mill site where the uranium tailings are presently stored; and

WHEREAS, the Ute Mountain Ute Tribe, the Fort Mojave Tribe and the above named tribes have many cultural, traditional and sacred places along the Colorado River, both within and in close proximity to their reservations and the release of or leaking from the tailings into the Colorado River or the relocation of the tailings to or near these sacred sites would have devastating effects on the Tribes' cultural, spiritual and traditional existence; and

WHEREAS, the White Mesa facility is located near the Ute Reservation and sacred sites culturally and spiritually significant to the Ute Mountain Ute people; and

NOW THEREFORE BE IT RESOLVED, that the Inter Tribal Council of Arizona supports the Ute Mountain Ute Tribal Council and the Ft. Mojave Tribal Council in their opposition to moving the mine tailings, contaminated soils and cover material from the Atlas Mill site in Moab, Utah to a facility near White Mesa, Utah; and

BE IT FURTHER RESOLVED, the Inter Tribal Council of Arizona opposes leaving the mine tailings capped or uncapped on the banks of the Colorado River.

BE IT FURTHER RESOLVED, that the Inter Tribal Council of Arizona requests that the United States Department of Energy remove the 11.9 million tons of uranium tailings off the banks of the Colorado River to a secure and safe location north of Moab.

BE IT FURTHER RESOLVED that the Executive Director of the Inter Tribal Council of Arizona forward this resolution to the U.S. Department of Energy and other pertinent agencies.

Response:

See response to comment #1.

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